DECEMBER 1956 2s. 3d.

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Prospecting for Skilled Fingers (see page 328)

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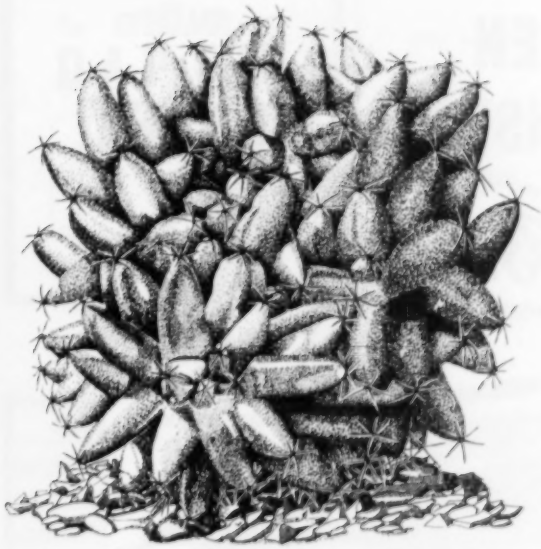

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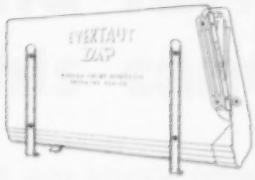

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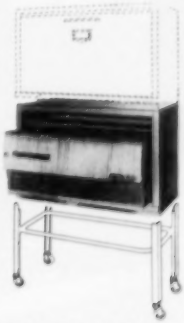

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SAFETY • HEALTH • WELFARE • CANTEEN

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Case for a National Suggestion Schemes Association — *Philip Barron* — 317
Detailed argument giving reasons why our idea-power should be guided by a national industrial body.

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Account of how the wool industry—Britain's oldest—is keeping up to date in its human relations.

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The problems facing management in the attempt to reduce the human factor behind accidents.

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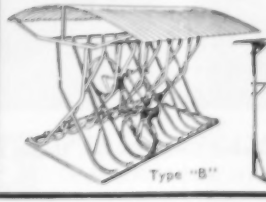
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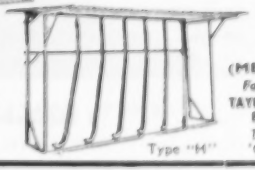
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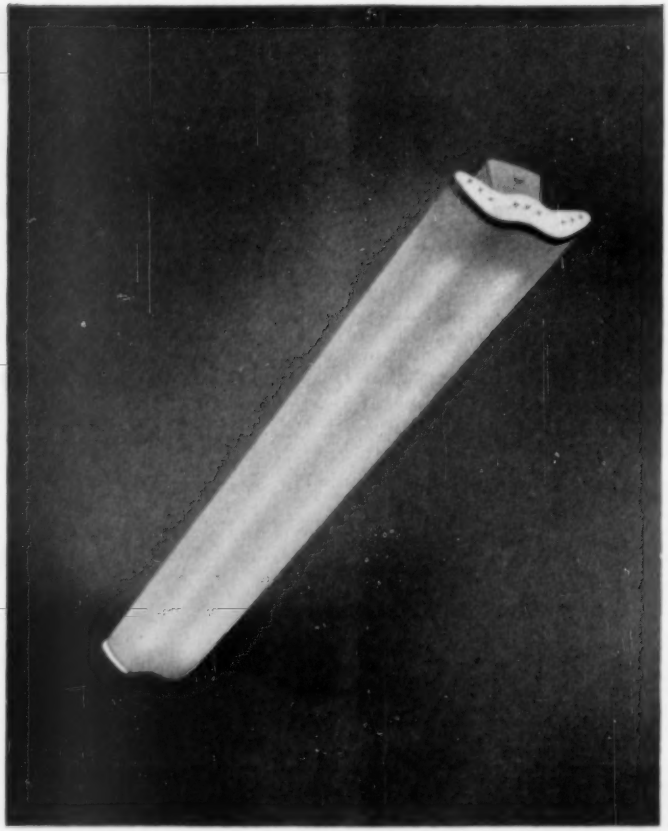

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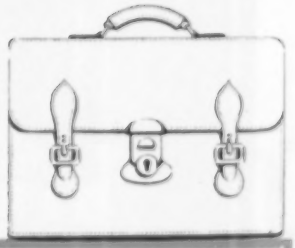

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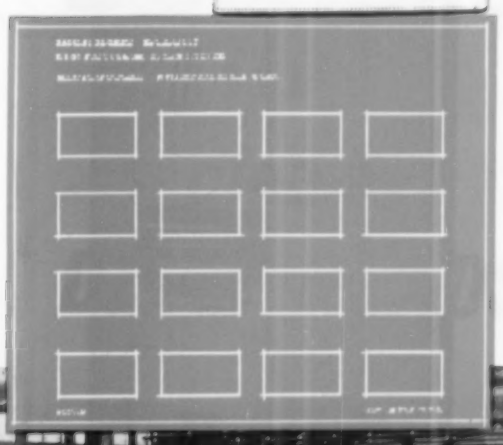

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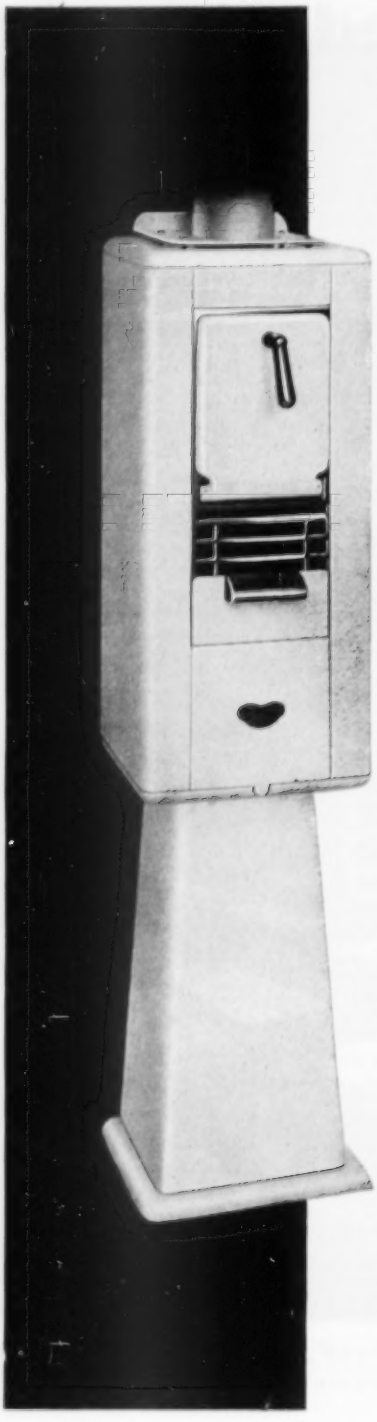

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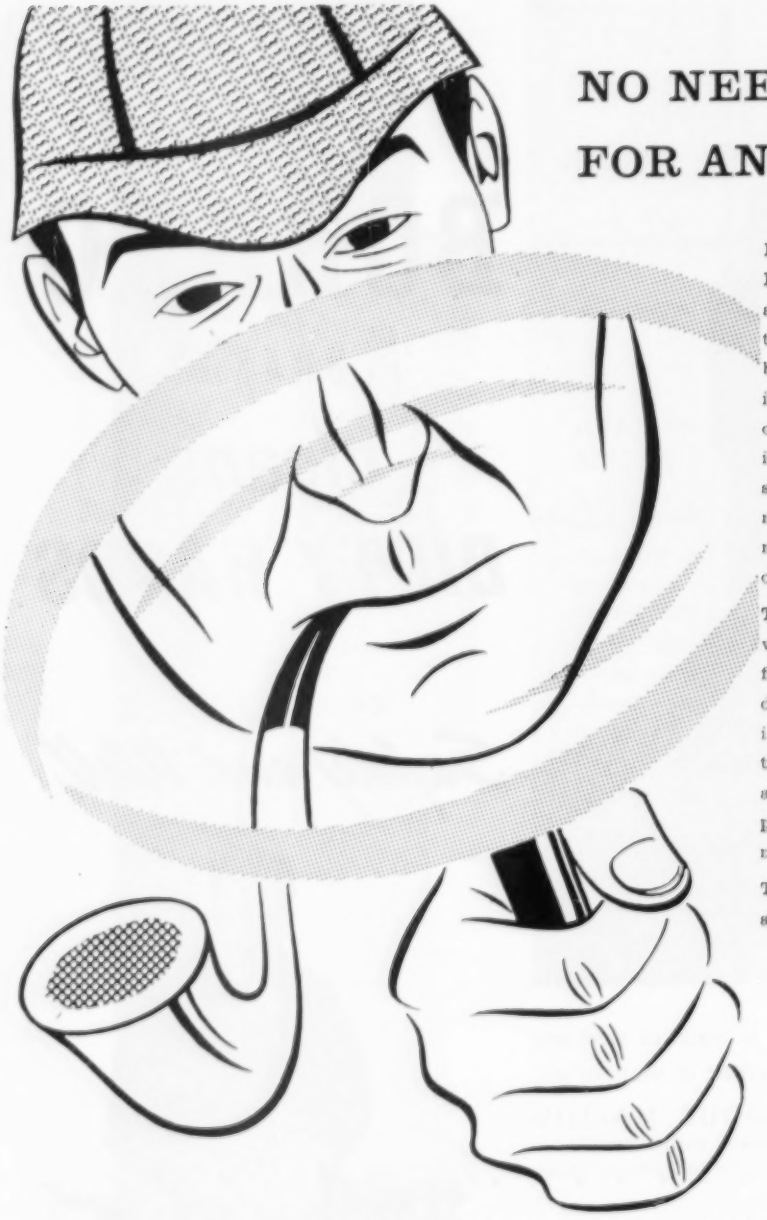

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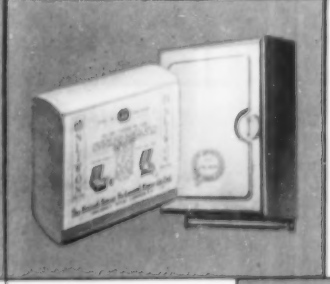

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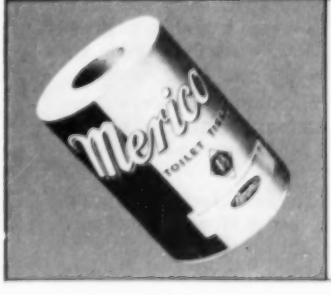

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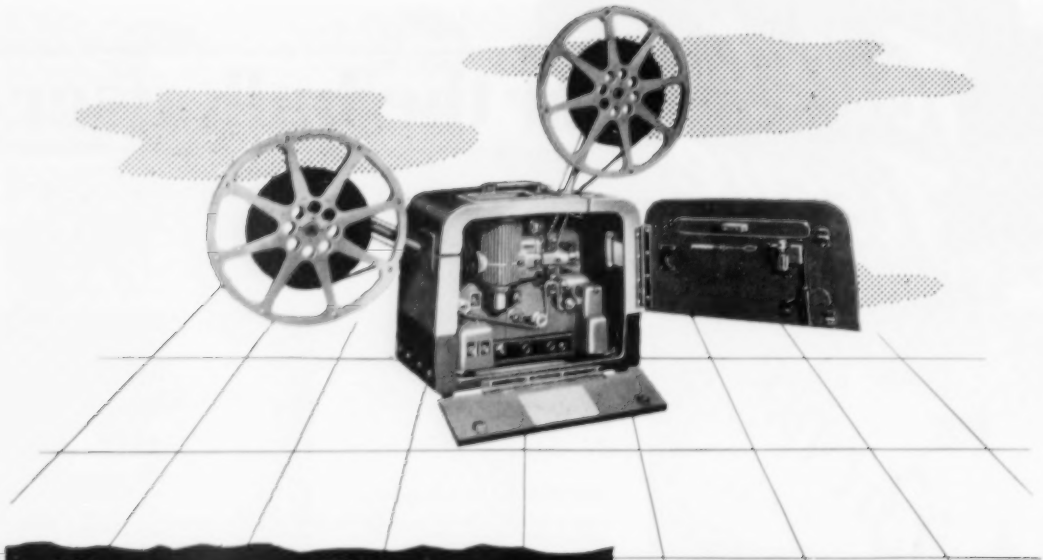

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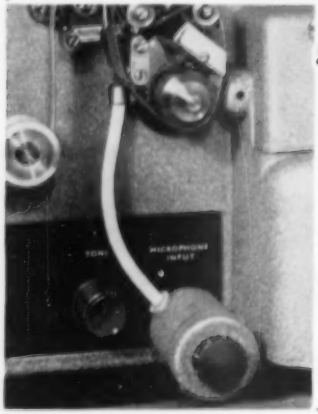

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Here is a forward-looking feature which urges that British industry should set up a national body to help firms with their suggestion schemes. In the U.S.A. such a body has been operating with marked success for a number of years, and the writer sees no reason why we could not do the same thing over here. The suggestion scheme, he points out, not only boosts productivity: it helps a worker feel he belongs and management to "hire the whole man".

An Ideas Bank for Industry

The Case for a National Association for Suggestion Schemes

By PHILIP BARRON

THREE hundred executives came to London recently, at the invitation of the British Productivity Council, for a meeting devoted entirely to the subject of suggestion schemes. The meeting was called at short notice because of the visit to this country of Ezra Taylor—founder ten years ago of America's National Association of Suggestion Schemes (NASS). He was supported by R. Graham Page, M.B.E., M.P., who urged the setting up of a similar unit in Britain.

Earlier this year, the House of Commons passed without any dissentients a resolution recognising the immense potentialities in this field and calling on the Government to "provide for encouragement, advice and assistance to Suggestion Schemes; foster public interest in the submission of ideas . . . and ensure generally that new ideas are applied to the best advantage".

But, of course, in this dear old country of ours the fact that everybody agrees that a thing should be done is no guarantee at all that it will be done, and the net concrete result of all this, so far, is . . . *nothing*!

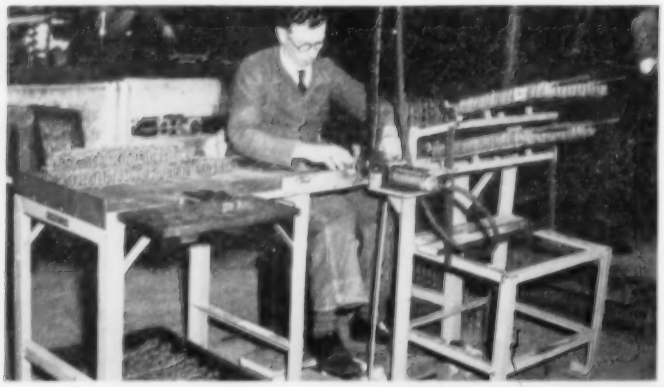
Now you may wonder what all the fuss was about, anyway. What is so important about suggestion schemes? What does NASS do, and how would a counterpart here aid industry?

In the first place, suggestion schemes have been proved a vital factor in productivity. This fact lifts them out of the category of an interesting human relations device and makes them of national importance. Britain needs to tap a far greater proportion of the *idea-power* latent in the minds of its workers, say many men of high standing, because it is this idea-power, and not automation, that is the ultimate key to economic survival in a competitive world.

At first sight, it may seem as if the advent of automation means less scope for creative thinking. But is this true? Automation has limits. Soon there will no longer be scope for *major* improvements in mass production plant, and we must expect that competing countries will eventually match our machinery. We must look

Ford Motor Company. Improved method of clamping the power take-off shaft of a tractor in a vertical hobbing machine is based on a cam action forcing two teeth into the splines thus ensuring a rigid fixing. Suggested by a chargehand.

Idea-Power at Work . . .



Vauxhall Motors. This idea enables a five-man team to sub-assemble squab seat rings faster than a previous team of eight on a conveyor. Devised by two leading hands.

for our most important opportunities in other directions. In the words of *Ford's* employee relations chief, R. E. Roberts: "We must recognise a new and challenging frontier of progress."

Even when it seems that the peak of efficiency has been reached, someone with ingenuity and alertness always finds a better way. The suggestion scheme is the device through which these vital qualities are fostered and translated into progress.

But it is not necessary to peer into the future to see that suggestion schemes are worth while, nor do I wish to suggest that it is all a matter of pure patriotism.

Estimates have placed the overall gains resulting from suggestions in the United States at well over 1,000 million dollars a year. One company alone, *General Electric*, last year received an average of one suggestion every six minutes, adopted one every eighteen, and paid over two million dollars in awards. Even in the Civil Service, it was reckoned that ideas were saving the taxpayer $34 an hour. Every dollar invested in departmental suggestion plans, it was estimated, reaped $26.

There's no knowing just how much a suggestion may mean to a company. Once an obscure firm was making heat-resistant glass for railway-signal lamps. One day a worker got the idea that the process might be adapted to make articles for kitchen use. And that started the glass ovenware industry.

Though no overall figures corresponding to those above are available for this country, there are scores of firms who are getting the same kind of returns for the time and money they spend on seeing that their suggestion scheme ticks over properly.

And that brings us to the second reason why some central, co-ordinating unit is needed for suggestion schemes in this country. Thousands of firms have suggestion schemes *but simply do not know how to make them effective.* Some have even abandoned their scheme because "*it never got going*".

Many schemes to-day are foundering on problems to which answers are known, or problems which would never have arisen if the schemes had been properly planned. Many capable executives just do not realise that there is a *technique* of the suggestion scheme which goes beyond the basic knowledge imparted by personnel management training and experience. That it is, in fact, becoming a science in its own right, with new facets emerging every day.

The thousand member-firms of NASS (note that—in ten years that number of firms have thought it worthwhile to subscribe) are able to share an ever-growing pool of know-how, and can get an up-to-the-minute answer to any problem relating to suggestion schemes. This is important, because, as with all fields involving psychology, even "expert" opinion is liable to be modified with the accumulation of experience and research. For instance, it was once thought that what is called the "anonymous system" (where the suggester is identified only by a number at all stages of the investigation) was the most successful. But to-day most firms use the "semi-anonymous" system (the suggester's name is known to the secretary of the Suggestion Committee, but not to those to whom the idea is passed for investigation).

British Railways. A special lever, designed by a ganger, for turning 300-ft. lengths of rail. A quick-release device on the end of the handle prevents the lever being trapped.

Many a suggestion scheme is now ticking over nicely because it was correctly planned at the start with help from NASS. Other schemes that had been "existing" for years have taken on a new lease of life when they were given a scientific "new look". *Ford's* did not introduce a formal scheme until 1947, and in that year awards totalled only $2,584. But after the scheme was "streamlined", awards rocketed to over half

Ford Motor Company. Trolley rack for clutch discs, a chargehand's idea, cuts handling costs and damage risk. Loaded trolley is lifted by overhead crane to nearest passageway, thence by forklift truck to storage.

a million dollars. Think what that means in terms of the gains to the firm!

This function is in itself sufficient justification for such a unit as NASS, but there is a secondary function that is very important to industry as a whole, and that is the canvassing of the suggestion scheme idea. Although the firms in NASS belong primarily because it pays *them*, it is only natural that the men and women involved also delight in "spreading the gospel". They are enthusiasts—that's why they were put in charge of suggestion activity. They are proud to be in this work, for they know that well-run schemes are beneficial all round—to employers, to employees, to consumers and to the nation at large. So they naturally encourage others to set up schemes or to set right the ones they have. They not only disseminate information through the organisation's H.Q., but also hold conventions and local "chapter" meetings where they themselves and any who are interested can learn more.

An enormous amount of idea-power is lying dormant because the heads of small businesses, which in total account for a very large part of our industrial life, have the impression that a suggestion scheme is not worth while in a small concern. Yet a NASS survey revealed that firms employing as few as 15 men were operating successful, paying suggestion schemes. We need an organisation to promote the suggestion scheme idea, and at the same time furnish a "pool" of know-how and a means for adding to it through the tabulating of data and other research.

Appoint Manager

A number of companies now have a full-time suggestion scheme manager. This, incidentally, is not merely because looking after suggestions in a fair-sized firm is a full-time job, but also because it has been found best to keep this activity distinct from that of the personnel manager. He cannot then be held responsible for turn-downs, and can act as a neutral third party in settling any misunderstandings.

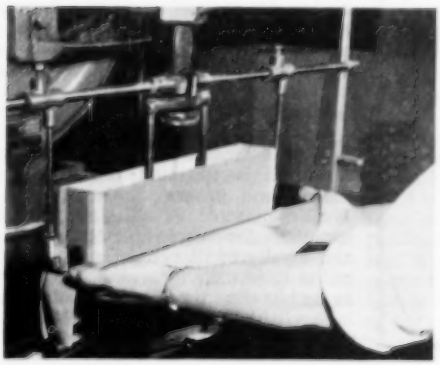
Some companies believe that joint consultation obviates the need for a suggestion scheme, but this is, of course, a short-sighted view. Joint consultation provides some kind of outlet for grievances and for certain types of suggestion, but what about those interesting little discoveries that a man may make "on the job"? Is he going to share them with his shop steward representative? Why can't he "come direct" through a scheme that makes it easy for him? Joint consultation and a suggestion scheme are two different things designed for different purposes.

Perhaps a basic fallacy in managerial thinking about suggestions is the assumption that "if a man has an idea, he's only got to tell us". Things don't work that way. Go-ahead firms know that the man with latent creative talent must, ninety-nine times out of a hundred, be wooed, coaxed and continually encouraged to use his flair on their behalf.

This positive approach has a snowball effect: as one worker ventures a suggestion and collects an award, so others are stimulated to do likewise and an atmosphere is created in which workers take a pride in a creative approach.

A well-run plan makes efficient operation popular and desirable even among those workers who never submit an idea. It is also proof of the progressiveness of your organisation. The best workers, as you know, will

Kodak Limited. Tongs fitting holes in camera case enable spraying to be done in one operation instead of two. Idea of maintenance fitter . . .



. . . and deep lids for X-ray boxes used to be paper-covered until an employee's suggestion made it possible to use the Deritend machine and boost output by a third. (Pictures, courtesy TARGET magazine.)

not stay with an unprogressive concern. They will tell you that they want to be with a firm that is going places.

Yet, when you ask the average person to do something which contributes to progress, he often shows the opposite attitude. He does not want to change. The suggestion scheme helps here, too, states F. L. Maytag, a leading American industrialist, "by giving the employee an opportunity to make changes of his own, and to participate in the changes made by management". Experience in his own plants has led Mr. Maytag to conclude that "resistance to change decreases very substantially when employees themselves have an opportunity to initiate changes".

Far from straining relations between line-worker and supervisor, it has been found that a properly planned suggestion scheme actually improves them. This is due in part to the fact that the supervisor has greater opportunity for constructive and complementary talks with the employee.

Nevertheless, this question of supervisory backing is a tricky one on which a number of schemes have foundered. No foreman or department head should be allowed to get the idea that the suggestion scheme is going behind his back and asking for criticism of the way his department is run. For this reason, the scheme should operate through and with the regular supervisory channels.

Employees' attitude to the scheme will generally reflect that of their foreman or supervisor, so they are key people. Many firms get on the right side of them by paying them a yearly bonus based on the total of suggestion awards paid to people under them.

Sometimes there is "resistance" from rank-and-file employees. This may be due to flaws in the rules of the scheme, or to elements of mistrust. For instance, workers may not be convinced that they can submit ideas without fear of their being pirated. Or they may think that ideas that increase productivity might put themselves or their friends out of work. Such fears are more widespread than many executives realise.

Even in a company which had been introducing all its employees to the suggestion scheme through a series of educational conferences, about one in four were found to hold this idea about redundancy. At least one firm have countered it by the simple method of guaranteeing that anybody "laid off" through a suggestion improvement will have a holiday with pay until he is re-absorbed by the company!

Intangible Benefits

Many firms rate the "intangible" benefits of suggestion schemes even more important than the direct cash gains. "In my opinion", states one prominent personnel man, "the suggestion system is one of the best practical devices we have hit upon to enhance employee interest in company welfare and to develop loyalty, pride of achievement, consciousness of the realities of profit and loss, and the many other qualities of the mind which distinguish a valuable employee from a fellow who just works at a job."

But the donkey-and-carrot conception of a suggestion scheme is not good enough. "The workers must feel that their participation is not only desired but also *needed* by management", reports a NASS survey. "Without this element, the best organised plan will fall short of real success."

To-day we all accept man's right to vote, but many still don't really accept his right to think. The suggestion scheme provides a new type of economic franchise which says in effect: "We hire a whole man. He brings everything to the job. He doesn't just use his hands." He can use his head as well, and how that can boost his self-respect!

The suggestion scheme idea gives a man a psychological recognition which has no substitute as an inspiring element in his life. He belongs. We have told him that he is a member of an interdependent team and have extended that interdependence to thought.

By contrast, a rather conservative company with no suggestion scheme decided a few years ago to make a survey of employee opinion on company personnel policy. One reply, from an older worker, started with this telling sentence:—

"*I have worked here for* 20 *years, and this is the first time anybody has asked my opinion about anything.*"

With a good suggestion scheme, such a tragic breakdown of communication could not occur. Such a scheme is a standing invitation to the employee to speak his mind.

Are Britons really less ingenious than Americans? I doubt it—but Americans get the encouragement that makes such a difference. "We hire a whole man." That is the way men (and women) like it. When more businesses recognise the fact that a man brings a head as well as a pair of hands to his job, we shall have a happier, and more secure, working world in which to live.

I have by no means exhausted either the benefits of the Suggestion Scheme, or the problems on which a counterpart to NASS could throw valuable light for British firms. I would just leave with you these words of Bill Given, president of the *American Brake Shoe Company*:—

"The success and progress of an enterprise is the sum total of the success and progress of its people. The management which fails to stimulate the whole-hearted interest and loyalty of its people and fails to utilise fully their ideas and initiative, as well as their time, energy and skill, is short-changing its stockholders and the public it serves."

Tap Ideas Effectively

1. **Appoint a suggestions scheme manager: in a small firm this could be a part-time job.**
2. **Always bear in mind that ideas have to be *coaxed* from most workers.**
3. **Get each supervisor interested by paying them a yearly bonus based on the number of suggestions awards.**
4. **Guarantee that no one will be out of work as a result of a suggestion scheme improvement.**
5. **Impress on workers that your scheme is a standing invitation to them to speak their minds.**

What Do We Mean by NEUROTIC ABSENTEEISM?

By ALAN H. OWEN

All the signs today point to a large increase in the number of "neurotic" cases in industry. As this article points out, however, there is strong evidence that many of these cases are not neurotic at all—merely frustrated. On the contrary, genuine neurotics are "one of the most conscientious groups in human society". The writer also stresses the importance of good supervisors. "Bad ones", he says, "often take their sickness rates with them."

A RECENT industrial survey has shown that at least one in four of all Scottish sickness absentees is sick with a "neurotic" complaint. This finding by the Scottish Association for Mental Health appears to have caused no small alarm in some quarters.

Is it really so startling, however? One recalls, for instance, that in 1947 already Dr. Russell Fraser published a classic report, *Incidence of Neurosis Among Factory Workers*, in which he showed that of 3,000 workers investigated in the Birmingham area, some 10 per cent went sick with a serious neurosis, and another 20 per cent or so with various "neurotic" complaints of more or less minor significance. "Neurosis" was in fact shown to account for about a third of the total sick list during the six months under review. Similar evidence may be found in plenty among the publications of Her Majesty's Stationery Office.

The term "neurotic" itself is a sort of umbrella covering a multitude of things. Loosely used, the word is an indiscriminate term, a convenient lumping together of ills for which no physiological cause is apparent. The word is, in its proper usage, the adjective pertaining to "neurosis", a psycho-medical term. Strictly speaking, a neurotic is a person who is aware that he or she is mentally sick, but is powerless to return to health of his or her own efforts. (Psychotics, on the other hand, have already lost contact with reality.) About 95 per cent of so-called "neurotic" ills are, in the sense quoted, not neurotic at all. They are due to some personal frustration or other; mainly frustrations on the job, but occasionally also private frustrations brought from the home into the job. It is important to keep one's mind open to the possibility that in many cases absenteeism is an understandable reaction to unbearable frustration.

The surprising fact is that on the whole real neurotics are not a bad risk in industry. On the contrary, the small group of true neurotics are one of the most conscientious groups in human society.

At this point one may draw attention to the excellent work of the small group comprising the Medical Research Council's Unit for Research in Occupational Adaptation. In a paper on occupational psychiatry published in *The Journal of Mental Science* (January, 1953) a member of the group, Dr. Morris Markowe, summed up the Unit's experience in this field of industrial medicine as follows:—

"It can be said *firstly* that psychological disability is by no means synonymous with occupational disability; and *secondly*, that neurotics when working individually give as good an occupational performance in the groups studied as the average unskilled worker, whether in terms of production, fitting in, or *staying on the job*." (My italics.)

Another interesting point made by Dr. Markowe refers to two independent but parallel groups of workers in the Manchester area. Dr. Markowe reports that "contrary to expectation, the group which was (mentally) less healthy and industrially less effective had less absenteeism than the other! Thus in this study absenteeism was related to a higher standard of occupational adjustment."

Research projects by other members of the Unit extend to the industrial and social rehabilitation of even chronic psychotics, as in the case of the "hospital factory" set up by Dr. Morris Carstairs and colleagues in a large L.C.C. mental hospital. Another eminent worker in this field is Dr. Maxwell Jones, whose Industrial Rehabilitation Unit at the Belmont Mental Hospital attracts international attention. I was privileged to spend a day with these two eminent occupational psychiatrists at Dr. Carstairs's "Workshop" for gravely disturbed chronic psychotics. *Even in these pathetic surroundings and extreme circumstances "absenteeism"*

Some Facts About Industrial Neuroses

1. *About 95 per cent. of neurotic illnesses are, medically speaking, not neurotic at all.*

2. *Look first for personal frustration in the case of a habitual neurotic absentee.*

3. *Mentally sick people will respond to the proper incentives.*

4. *Changing the conditions of work is often an effective remedy where the pseudo-neurotic is concerned.*

5. *Bad supervisors have a habit of taking their sickness rates with them.*

6. *The possibilities of "tranquilliser" medicines have still to be fully explored.*

was not a problem. For Dr. Carstairs had found the right incentives to spur his group on. Here, indeed, it is very tempting to draw a moral for industry from the unusually understanding and humane leadership responsible for the success of this social experiment. But the moral would, alas, be a counsel of perfection. . . .

In the paper already quoted, Dr. Markowe mentions the difficulty of establishing reliable criteria for measuring "neurotic" traits. In industrial practice the situation is acutely bedevilled by the loose use of the term. Enough evidence has already been adduced in this article, however, to suggest that much harm, and perhaps even individual injustice, could be caused by uncritically correlating the term "neurosis" with sickness-absenteeism. Indeed, it is an already established fact in industry itself that one group of industrial "neurotics", the accident-prone employees, are, apart from their propensity for harming themselves, among the healthiest of workers.

The present writer is a representative of an industry which, for institutional and "ecological" reasons, is a happy one and, therefore, has almost no "neurotic" absenteeism. The author himself is fortunate in having an interesting and relatively well paid post. Yet, if he were by some adverse fate relegated to a nondescript, routine industrial job in a dismal industrial town, he might well very soon—and not at all unconsciously—develop all manners of "neurotic" illnesses to relieve the irksome, semi-military discipline. And he would soon be the less reluctant to prolong them, the smaller the differential between his normal pay and his sickness pay.

A lot of confusion could, one feels, be avoided if the term "neurotic" were left to clinically recognisable symptoms, all the other cases being referred to "stress", a vague term which leaves the question of social or individual responsibility open. It would then be a prime social task to establish to what degree the maladjustments showing themselves in sickness-absenteeism were due to local conditions in a particular factory or industry, to fundamental aspects of industrial structure, to general social factors, or to personal inadequacies.

A glaring illustration of the misleading ambiguity of the term "neurotic" in its present usages is provided by the classic investigation into the troubles of female telephonists in the main Paris exchanges, as reported (February 15, 1956) in the French medical journal, *La Presse Medicale*.

The authors drew attention to the increasing frequency of *minor* "neurotic" ailments among these telephone operators. Recognisable stress symptoms began to appear during the first year of work; thereafter they grew steadily worse. Underlying causes established by the investigators were the *pressure* of work in a basically not difficult job, and the *strictness of supervision* (i.e. a sort of *military* regimentation!).

The symptoms were unpleasant enough: gastric upsets, nervous vomiting, persistent headaches (in 34 per cent of the cases); sleeplessness (chronic insomnia in 38 per cent); changes of mood and personality with suicidal thoughts; and "nervous fatigue".

Yet—were these undoubtedly unpleasant symptoms indicating emotional and nervous disturbances "neurotic"? Not if it was true that, as the authors stated, the symptoms began to appear only *after* the afflicted people had begun working as telephone operators. The authors themselves imply that the symptoms were the passing results of frustration. Indeed, their recommendation was that *the remedy lay in changing the conditions of work.*

It would be presumptuous of us to give the French investigators unsolicited advice. We may, however, allow ourselves the indulgence of wondering whether they considered the advisability of investigating the supervisors. In 1942 Bashford published an article in *The Lancet* (vol. 2, p. 289) on "Supervision and Sick-Absence in Industries." He showed the extent to which the sickness-rates of given groups of workers were a "function" of the supervisors in charge of the groups. In fact, Bashford found that, when the supervisors were shuffled around, they took "their" sickness-rates with them!

It is, however, a fact to be pondered over that the same counsel of perfection is the only remedy which it has hitherto been possible to suggest for dealing with the large amount of sickness-absenteeism in industry ascribable to industrial frustrations and maladjustments. Apart, of course, from the time-honoured course of doing nothing at all about the problem. . . .

Unconscious Protest?

In the last analysis, it may perhaps be argued that British industry is only now emerging from the final stage of the Industrial Revolution; and that the present general increase in "neuroticism", both in industry and social life, is due to a vague but growing will to a larger, and less institutionally disciplined industrial life. The right to "go fishin'" is deeply ingrained in British political theory; it has hitherto been overshadowed by grim economic realities. Full employment and the Welfare State seem, rightly or wrongly, to be reviving the folk-memory of Merrie England. . . .

To cut a long story short—"it will grow worse before it grows better". Is there not anything useful that can meanwhile be done?

Various contributions to a solution can and will be made. One such contribution, a novel one, concerns pharmacological research, which is already effecting a close link-up with psychiatric research. Of late there has been much public enthusiasm—sometimes dubiously encouraged—in the "tranquillisers". More recently, however, a new kind of pharmacological action has been discovered. This is the ataractic action, so-called because of the emotional sedation achieved without hypnotic effect, without clouding mental acuity or

(*Continued on page 327*)

Management News & Ideas

"Here be Dragons"

IT was the practice of the early cartographers when dealing with unknown parts of the globe to assert that "here be dragons". The Industrial Welfare Society is under no delusion that fear and suspicion of the unknown is a thing of the past, to judge from a Conference it is holding on December 11. Theme of this gathering is "Resistance to Change among Managers".

The morning session will include an address by Mr. Tom Burns, of the University of Edinburgh, where some interesting research on the subject is being conducted. In the afternoon an account of a progressive company's approach to the problem will be given by Dr. D. E. Wheeler, managing director of the *Wellcome Foundation Ltd.*

Applications to attend should be sent to Mrs. O. K. Skelley, Administrative Officer, Industrial Welfare Society (Inc.), 48 Bryanston Square, London, W.1.

Inspectorate Increase

THE approximate trebling and decentralisation of the engineering and chemical branch of the Factory Inspectorate, and the appointment of 26 more inspectors of building sites and engineering construction, have been announced by the Minister of Labour. The announcements are made in a White Paper (*Cmd.* 9879, *H.M.S.O.*, 2*s.*) following a recent survey of staffing and organisation—the first comprehensive review since 1928.

The increase which will allow for one inspector in each of the country's 13 divisions, as well as some strengthening of the branch at headquarters, will enable the branch to clear up existing arrears of work, notably the preparation of advisory pamphlets.

An important personnel point which the report makes is the full equality of status with men now enjoyed by women employed in the Inspectorate.

Fire Information

FIRE hazards arising from the use of certain materials as a form of thermal insulation of buildings are examined in one of three technical information sheets now available from the Fire Protection Association. The sheet (No. 4002) describes with tables the particulars and results of tests carried out by the Joint Fire Research Organisation, using a variety of insulating materials.

No. 1004 lists the stringent precautions against fire needed where nitrate or cyanide baths are used in the heat treatment of metals, and the protection of buildings from fires caused by lightning is covered in sheet No. 4003. Application for copies should be made to the Association's headquarters at 15 Queen Street, London, E.C.4.

INDUSTRIAL FILM FESTIVAL NEXT YEAR

MANY firms are reluctant to put money into films on human relations, training, welfare, safety and industrial achievement, unless they are made against the background of their particular industries. This opinion is expressed in a report by the Scientific Film Association on the possible joint sponsorship of industrial films. After two years' consideration, a working party has reached the conclusion that sponsorship is at present impracticable, since further education is needed in the value of films as a means of communication within industry.

In the meantime, however, it is announced that the Association, together with the T.U.C., the Federation of British Industries, the Central Office of Information and the Association of Specialised Film Producers, is planning a festival of industrial films to be held at Harrogate in October next year. President of the festival will be Lord Godber, chairman of the *Shell Group*, who make and use industrial films on a large scale.

"Films in the Service of Industry", as the festival will be called, aims to show how films are being used in industry, enabling sponsors and producers to evaluate them, and to study examples of the best productions from all over the world. Producers and sponsors of industrial films will be asked to enter them on a competitive basis. The purely advertising type of film is excluded.

Invitations to participate in this, the first festival of its kind to be held in this country, will be issued in the New Year. The headquarters address is 3, Portman Chambers, 7-9, Baker Street, London, W.1 (WELbeck 1104).

Inform the Ministry

CLOSER attention by employers to the work of their accident prevention committees and local accident prevention councils was urged by Mr. Robert Carr, parliamentary secretary to the Minister of Labour, in a recent speech to the Institute of Directors. He stressed the double contribution to industry which employers could make in this field, by making people safety-conscious and increasing production at the same time.

Dealing with another form of manpower wastage, he spoke of the redundancy and transfer problems, and the government's pledge to maintain full employment. The efforts of the employment exchanges could be greatly helped by the close co-operation of employers. "The more we know about public demands and potential redundancies", he continued, "the more efficient will be the service my officers can give to employers and workers alike."

SECURITY A LA MODE. . . .

T.V. as factory watchdog. The American **Philco Corporation** now uses an industrial television installation for security control to observe three entrances to classified areas. The new set-up means that one guard can observe three posts, thus making a valuable saving in manpower.

Scientific Manpower

INDUSTRY and other main users of scientific manpower have told the Ministry of Labour that they want over 30,000 more qualified scientists and engineers in the next three years. The Scientific Manpower Committee of the Advisory Council on Scientific Policy estimates that at least 85,000 more will be required in the next ten years, representing an increase of 63 per cent over the numbers employed today.

This information is given in a report on scientific and engineering manpower recently issued by the Ministry and the Advisory Council (H.M.S.O., 1s. 6d.), which continues: "This is a statement of a minimum goal which needs to be achieved if the economy is to grow at an acceptable rate. If the universities and technical colleges can achieve more so much the better. We are reluctant to believe that less could be accepted as a target."

Building Foremen

THE year-old Building Advisory Service was described recently by Mr. Nigel Hannen, president of the National Federation of Building Trades Employers, as one of the Federation's most successful enterprises. Mr. Hannen, who was addressing the Manchester and Salford Association of Building Trades Employers at their annual dinner, drew attention to one interesting development of the non-profit making service. This was the running of "tailor-made" courses for supervisors to meet the needs of individual building firms. They provided "a first-rate means of getting the best principles of scientific work study methods applied directly to work on the sites".

The service, which was set up to help building firms improve their managerial methods and general efficiency, now has a full order book, and has carried out assignments for over 50 firms of various sizes in all parts of the country—"a valuable contribution", Mr. Hannen contended, "to the over-all efficiency of [the building] industry".

Consultants Combine

FOUR of the leading British firms of management consultants have formed the Management Consultants Association. The firms are Associated Industrial Consultants Ltd., Personnel Administration Ltd., Production-Engineering Ltd., and Urwick, Orr & Partners Ltd.

The four firms will continue to compete with each other in their business of helping to improve the productive efficiency of management in British industry, agriculture, central and local government, and the public services. Technical progress, however, poses problems which demand speedier solution and co-operative research. The Association's aim is to pool research on newer problems and exchange experience on older problems. It will co-operate with other research and professional bodies concerned to improve managerial techniques, and it will make available the results of its research.

The Secretary of the M.C.A. is Mr. F. S. TUFFIN, 4, London Wall Buildings, London, E.C.2. (London Wall 4080.)

Course Pays Off

SUBSTANTIAL fuel savings have been reported by many firms as a result of training received by employees who took part in the first course of the NIFES training scheme for boiler operators ("Personnel Management" Picture Story, September issue). One firm reports a saving in fuel costs of £1,000 *during* the time its employees were taking the course, and in another factory £20 cash bonuses have been presented to men successful in obtaining the Boiler Operator's Certificate.

NIFES has also arranged special short courses at the request of many individual companies. A three-day residential course was recently organised for the West Midland Gas Board under a NIFES instructor, with an attendance of thirteen men, and similar arrangements have been made to train another 50-60 boiler operators.

Electronic Selection

LATEST among the many new techniques to be applied to personnel selection in recent years is an electronic device which is said to record the emotional reaction of the candidate during the interview and thus reveal when answers are not accurate or complete.

The method was developed by Cleve Backster, a New York management consultant, and is known as the Backster Evaluation. It is already available in several large cities of the U.S.A.

The procedure is for employers to refer applicants to this "electronic screening service" which makes an oral report on the applicant within two hours. A written report follows, giving details of his past jobs, reasons for quitting, his honesty, his physical disabilities, his drinking and gambling, his financial and marital status and other pertinent facts.

Selection techniques used in personnel management may now be as numerous and varied as the roads to salvation—one British firm claims to give an accurate assessment merely by noting the movements of the candidate's body—but none so far had called for electronic equipment. It is all the more interesting, then, in view of the recent speech of Dr. A. Torrie, a consultant psychiatrist to the British Institute of Personnel Management. Speaking on "The Limits of the Contribution of Social Science to Management", Dr. Torrie warned that science could never explain the whole man. Mr. Backster's device on the other hand would seem to argue that the machine can now take over where psychology leaves off.

Auto-Safety

THE possible effects of automation are being considered in all parts of the country and many parts of the world. One aspect, the effect of automation on health, was recently commented on. It was thought that as mechanical handling increases there will probably be a steady decrease in the number of accidents to fingers and hands; there should also be a reduction in the number of hernias, crushed feet and back injuries. Mention was made of an 85 per cent reduction in the number of hernias in a car factory in the United States. **(Welfare Officer.)**

Plan and Train

THE need for long term planning in both the human relation and training policies of industry was stressed recently by the Minister of Labour and National Service. Where the former was concerned, the responsibility for the gradual building up of contacts between management and workpeople rested first of all upon the employers. "Consultation is not simply a matter of procedure or agreements," the Minister continued, "communications are not communiqués."

The Minister was addressing members of the Institution of Production Engineers at their annual dinner in London. He mentioned the problems created by technological advances in industry and called for closer attention to the systematic training of operatives. Many people were afraid of losing their present jobs where they had acquired experience rather than skill, because they could not be sure whether they would fit easily into another job or another factory. Management, too, required a training in keeping with the age in order to bridge the widening gap between those who manipulated the new machines and those who understood the operation of the production process.

One piece of good fortune which had to be exploited while it lasted was the increase in the number of young people who would be available for industry in the next few years. Systematic training was vital, and in this connection he had set up a committee to examine the adequacy of the numbers of apprentices available and the quality of present training arrangements.

Talking Points

TIPS on Talking is the title of a booklet produced by the West Midlands group of BACIE and the Midlands T.W.I. Association. It comprises 16 pages containing hints on presentation, delivery and timing. It deals with preparation, how to start, the shape of the talk and final check. Its cost is a nominal 1s. 6d. and copies can be had from Mr. A. M. K. Turney, education and training officer, The Hercules Cycle and Motor Co. Ltd., Aston Cross, Birmingham 6.

This Man took his Union to Court

By LAURENCE WEBLEY, LL.B.

A barrister here analyses a recent court case concerning the status of a trade union member. This case, he stresses, raises serious issues of policy/inter-union relations which could well threaten a man's ability not only to use his skill but to get work at all.

THE ordinary trade unionist probably gives little thought to his status as a member of a union when all is going well, although in many, perhaps most, employments, few matters are more vital. Deprived of his membership, he may find it impossible to use his skill and training or even to get work at all. In this field the recent case of "Spring *v.* National Amalgamated Stevedores and Dockers Society" is of great interest and importance and the facts of this legal battle on trade unionists' rights and the background of the case, heard in the Palatine of Lancaster Chancery Court at Liverpool, merit the attention of all those engaged in industrial management and welfare.

Spring was a registered dock worker. At one time, he belonged to the Transport and General Workers Union. Following a dock strike at Hull, great dissatisfaction, apparently, arose among the members of this union in Liverpool and in other ports in the North of England, and about the end of March or the beginning of April, 1955, Spring applied for and was accepted for membership of the Amalgamated Stevedores and Dockers Society, the defendant union in the case. He was, in fact, one of many thousands of dockers in Liverpool who did the same at about this time. This "poaching" of Transport and General Workers Union members by the defendant union led to considerable friction between the two unions and a serious strike over the question of recognition, because the Transport and General Workers Union was not prepared to tolerate recognition of any union, save their own, by the dock employers.

Eventually, however, the two unions agreed to submit their quarrel to the Trades Disputes Committee of the Trades Union Congress, the committee which had been set up following the Bridlington agreement of 1939. This was an agreement which laid down certain principles for enabling disputes between unions to be avoided. It was described by a Trades Union Congress official in the course of the case as a morally binding code of conduct between people of similar views.

The Trades Disputes Committee made an award to which the two unions submitted, the effect of which was that it became necessary for the defendant union, in July, 1955, to tell all its members in the Northern ports who had been recruited since August, 1954, that they were all excluded from the union. Spring was, of course, one of the men affected and, accordingly, he launched an action against the defendant union claiming an injunction and declaration that his expulsion was unlawful and that he was still a member. He declared that the decision of the Trades Disputes Committee was not binding on him and that his employment was in jeopardy.

Defence Claim

The defendant union, on the other hand, asked for Spring's membership to be rescinded. The substance of the union's case was that Spring had been excluded in compliance with the award of the Committee under the Bridlington agreement, and that this agreement was an implied term of Spring's contract of membership with the Society. Giving evidence before the Court, Spring said he had not heard of the Bridlington agreement when he joined the Society.

The judge observed that the issues raised might affect the lives of many working at the docks. Until 1954, the membership of the defendant union had been very small and the Transport and General Workers Union had had a monopoly in the ports outside London. After the strike at Hull in 1954, many of the Northern dockers had sought to transfer to the defendant union. At first, this union, in compliance with the Bridlington agreement, had required the applicants for membership to be clear on the books of the Transport and General Workers Union and to notify that union of their intention to resign. However, it was clear that those who were working for the defendant union in Liverpool discarded these requirements, and fell back on a rule of the Transport and General Workers Union that if a member became 13 weeks in arrears with his contributions he would be deemed to be no longer a member; Spring was in this position.

There was no question, said the judge, of the defendant union being misled or making a mistake in its acceptance of Spring as a member. It was fully aware of the circumstances in which members were being recruited. It had been revealed, in the course of the action, that Spring was still paying contributions to the Society, the explanation being that, after the mass exclusion in 1955, the defendant union's members in the North had refused to consider themselves excluded. They had carried on in the name of the defendants although they did not send delegates or money to London where the defendants had their headquarters. There was, however, no suggestion of a collusive action here. The case had lasted six days and had been vigorously contested.

The question, accordingly, arose whether it was an implied term of the defendants' contract of membership with the defendant union that the union should have the right to do everything necessary to comply with its proper agreements, and whether the members should act in conformity with the Bridlington agreement. The judge went on to say that he entirely accepted Spring's evidence that it was not until the strike for recognition by the defendant union took place, some five or six weeks after he had been accepted as a member, that he first heard of the Bridlington agree-

ment. Even now, his ideas about its effect were quite inaccurate and imperfect. There was well-known legal authority as to the test of whether terms should be implied in written contracts; "something so obvious that it goes without saying so that if, while the parties were making their bargain, an officious bystander were to suggest some express provision for it in their agreement they would testily suppress him with a comment: 'Oh, of course!'" If that test were applied to the facts of this case and the bystander had asked the plaintiff when he signed the acceptance form: "Won't you put into it some reference to the Bridlington agreement?" he would, the judge had no doubt, have answered: "What is that?" That was sufficient to dispose of the case.

There was no reference either in the rules of the defendant union or in the rules of the Transport and General Workers Union to the principles laid down by the Trades Union Congress. It had been said also that the Bridlington agreement contained matters which trade unions, as entities, must or must not do. There was nothing about expulsion. The code was concerned with the admission of new members and nothing at all was laid down in it about getting rid of them. The judge did not see how a member who joined a new union could, by the importation of some implied term, be made liable for some infraction by the trade union of principles laid down as a morally binding code of conduct in the relationship between trade unions. The judge remarked that he had been asked by counsel for the union, because of the difficult position of the Dock Labour Board, if thousands of people were brought back into the defendant union and the Board was asked to recognise it, with the consequent repercussions from the Transport and General Workers Union, practically on the grounds of public policy, not to grant the injunction against expulsion. As Spring did not object, he would grant only the declarations in order to see whether wiser councils might prevail.

Accordingly, the member was successful here in upholding his contractual rights vis-a-vis his union. But the case, not the first of its kind, raises serious issues of union policy which this time, because of the numbers of men involved and the seriousness of the industrial troubles which arose, may have to be faced and settled. It would, clearly, be unfortunate if inter-union relations were to lead to the breach of contractual obligations to their members, perhaps with serious effects on their material welfare.

DISCUSSION LEADER

Are Your Workers Bored by Safety Propaganda?

How Best Can We Reduce the Human Factor in Accidents?

OUR discussion in August about the relationships between the foreman and his shop steward has provoked a spirited reply from Mr. T. of Birmingham, who is now a foreman but who until recently served "on the other side of the fence" as a shop steward. He says: "Your remarks about shop steward and supervisor 'being able to work together harmoniously on safety for the benefit of everyone' are, I'm afraid, all eyewash." Mr. T. supports his statement by describing an incident which occurred when he was a shop steward. He was loaned temporarily to another department and was put on a grinding operation. "The goggles hanging on the machine were too large for me", he said, "as the strap was old and worn. So I asked the foreman to procure me another pair. He brought me another pair all right, but as he walked away from me, I distinctly heard him mutter 'sissy!'"

I'm sure, Mr. T., you must have also met similar attitudes to this amongst workers as well as supervisors?—particularly, I would say, amongst older workers, for the emphasis placed on the need for safe working conditions and safe working habits, if maximum production was to be achieved, during World War II and since, has done much to change this old-fashioned approach. Any safety engineer will, however, testify that this and other negative attitudes towards safety do as much or more to keep accident rates high as do actual defects in tools or machinery. Investigations, for example, made into people's attitudes towards safety propaganda show that a feeling of resentment is often aroused by supervisors who conscientiously keep the need for safety continuously before their workers. Workers will report that they consider it to be a function best carried out by management and at the same time one of *the most irritating*.

On one division of a railway, for example, there had been an intensive safety campaign. Committees of inspection were appointed, meetings were held; foremen were asked to explain every accident and state the steps they were taking to prevent a recurrence; workers who broke safety rules were reprimanded and disciplined. The result was that accidents dropped to a low level and there had been no serious accident for over a year. The superintendent began to realise, however, that both the men and their foremen were getting very fed up with this constant hammering of caution in their ears, so he relaxed his efforts a little. Within three weeks three men had been killed and another seriously injured and there had been a big increase in minor accidents.

The superintendent called a mass meeting of foremen and men, explained what had happened and begged them to remain *willing* to co-operate in the fight for safety. The strict enforcement was resumed and the accident level went back to its

former figure. As in many other sociological investigations, we cannot, of course, say that the accidents would not have occurred anyway, since we have no control group, but the sequence of events suggests that there must have been a close connection between continuous vigilance and a low accident rate.

Once again we see that the actions taken by the manager (a leader) of the group profoundly influence their behaviour, although this superintendent's task would have been much easier if he had had the real backing of his own foremen. Let us suppose, however, that in your plant this willingness already exists. Have you any experience to guide us on what you have found to be the most important causes of accidents where you work?

We know that generally speaking the causes of accidents are largely human and partly mechanical. Certain physical and emotional states appear to go with a high susceptibility to accidents. Hunger, fatigue, cold, very low spirits and very high spirits, lack of automatic functioning on repetitive work are some of these states. The human element is also involved to a greater or lesser extent in all the other factors of accident causation, such as poor housekeeping (badly stacked material, congested aisles), defective equipment (materials, tools or machines), poor layouts of operations, machinery or processes, poor working conditions (such as ventilation and lighting), unsafe building conditions, and badly designed or guarded machinery.

Write and tell us how you tackle the problem of accidents in your department and company. Do you, for example, have joint safety committees of management and workers? Do you feel the presence of a safety engineer helps or would help your task? Do you take disciplinary action against unsafe workers?

EXECUTIVE SKILL

Organising Subordinates

I SHOULD like to use the rest of my space to pursue further last month's discussion on the functions of an industrial executive. We saw last month that the chief executive has a complex organisational, technical and sociological task to perform if he is to maintain a healthy business. What kind of help does he have from his immediate subordinates and how should they be organised? How many subordinates can a manager effectively control?

A recent study reported in "Personnel", the journal of the American Management Association, throws some light on this point. Chief executives in 620 plants in the state of Ohio, U.S.A., were asked, amongst other questions, what kind of supervisory control they used. The results show that a narrow span of control is overwhelmingly favoured, between 3 and 8 subordinates being the usual number, although executives of branch establishments have a larger number of subordinates reporting directly to them than executives at the main plant. If the chief executive has a large number of people reporting to him, he frequently uses an inner quorum composed of a few of them (often the heads of sales, production and finance) to help him formulate policy.

There is, however, an opposite school of thought which advocates that a manager should be in control of a large number of subordinates so that they can each manage their own sections with more authority. This authority of these managers, so the theory goes, should not in any way be impaired by functional specialists.

A recent case which arose in a branch scientific laboratory is a most interesting one from this point of view. A new officer called the planning officer was appointed and all incoming instructions and notices from head office were sent first to him. He studied them, and then prepared detailed instructions, taking account of local conditions which were released to the departmental heads after the head of the laboratory had approved them. The idea behind the change was to prevent each departmental head from interpreting incoming instructions differently, as had happened in the past. The planning officer was a very able man and the system worked well until he was away for two months. This delay caused great confusion and he never caught up on his return to work. One or two of the other departmental heads began to question whether his work was not in any case stifling initiative and original thinking amongst them. The head of the laboratory was faced, therefore, with the problem of either giving the planning officer an assistant or returning to the old system of allowing the responsibility to interpret incoming instructions and orders to rest with each departmental head. What advice would you have given to him? What do you think are some of the organisational factors involved in this case? Could some other management technique for avoiding confusion have been used?

A study just released by the University of California should be of interest to all supervisors. The investigators asked ex-employees of an aircraft firm why they left their work: 52 per cent of the workers admitted giving other than the true reason for leaving, the outstanding real reason for leaving being poor supervision.

DISCUSSION LEADER

Neurotic Absentees in Industry. . . .

(Continued from page 322)

moral judgment. (Ataraxia was the classical Greek ideal of emotional detachment without loss of warm human concern.)

Spectacular results in the treatment of emotionally unstable, scholastically "lazy" and highly nervous children have been achieved with the synthetic ataractic, hydroxyzine,* by Bayart at La Biloque Hospital in Ghent.

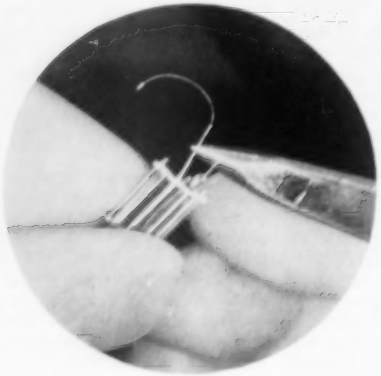
In a paper read before the recent International Paediatric Congress in Copenhagen, Bayart reported many permanent cures with this non-toxic substance, which is well tolerated over long periods of administration in children and adults. It is no condescension to suggest that the problems of nervous children are basically not different from those of many "neurotic" workers in industry.

In the closed professional circle of this journal's readership it may be ethically permissible to draw the attention of industrial welfare workers to this substance, hydroxyzine, as a possibly useful contribution to the problems of "neurotic" sickness-absenteeism, in so far as this is attributable to minor frustrations and stresses of conscious or unconscious origin.

I feel at least that, before premature decisions are made on drastic ways of dealing with "neurotic" illness in industry, modern pharmacology should be consulted—on the understanding, of course, that pharmacology should not be expected to relieve society at large of the responsibility of putting its house in order.

* Pharmaceutically known as *Atarax*.

A woman's touch. Deft fingers, sheathed in rubber finger-stalls to keep dust, salt and skin-oils away from the components, skilfully slide the fine filament into the mount.



The test of skill and cleanliness. There is no way of testing and rectifying a valve before completion. If there has been the slightest error in assembly the valve is worthless.

"Personnel Management" Picture Story

Selection Through the Eye of a Needle

CHOOSING GIRLS FOR A HIGHLY SPECIALISED INDUSTRY

THE construction and assembly of miniature electronic valves are intricate operations requiring, above all, good eyesight and a high standard of manual dexterity. An industry as specialised as this poses one peculiar problem—the selection of operatives who, while possessing these qualities, also have the temperament to stay at the job long enough to justify the time and expense of training.

Hivac Ltd. of South Ruislip, who have pioneered the manufacture of these pigmy valves are tackling the problem in several ways. Selection is the first hurdle. The work is not for everyone. It takes deft fingers and a super-delicate touch to assemble, say, a tungsten filament only one-tenth the thickness of a human hair. It takes a woman's touch—the uncanny skill with which she threads a needle. At *Hivac* the analogy has been adapted as the first test on application. From the way she carries out this simple operation —whether she holds the needle and thread unsurely at arm's length, or, even more uncertainly, an inch or two from her nose

By DAVID JUDGE

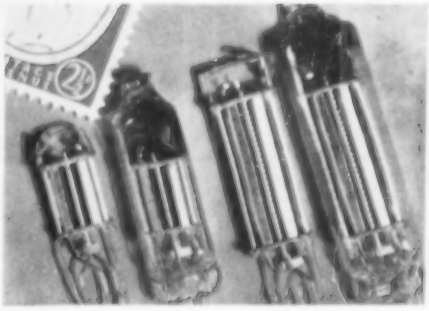
(threading a needle, it would seem, like cooking, is not every woman's *métier*), or whether she strikes a confident medium —her aptitude for the work can be assessed.

The test is simple, and as far as true selection is concerned, it is rather trivial, but it has proved the best method of selection for the firm's most pressing need —a steady labour potential. More complex tests have been tried, closer to the scientific method, but they were discontinued simply because they tended to disqualify too many applicants. An approximation of suitability has to do at a time when the rest of industry has more vacancies than staff to fill them. *Hivac* cannot afford at present to pass the applicants themselves through the eye of a needle.

Many firms find to-day that they must vie with each other in providing the finest working conditions if they are to attract and retain their staff. *Hivac's* record in this respect is a good one. Some of the up-to-date amenities are working essentials, of course. Cleanliness has top priority, for the smallest particles of dust could easily foul the high precision components of a valve. Air-conditioning throughout the factory keeps the dust out by maintaining the atmospheric pressure inside above normal. The roof has barrel vaulting instead of dust-harbouring girders, and the girls wear clean nylon overalls and headscarves.

But there are disadvantages in this from the woman's point of view. The ban on

In **Hivac's** "inner sanctum" the tiniest, most reliable valves are assembled. Cleanliness and dexterity are at their highest premium.



Comparison with a postage stamp shows how small Hivac's valves really are. Some of the parts contained would be lost on the relatively huge area of the stamp.

The minuteness of the components and the skill with which they are assembled "takes one's breath away", as it were. For the girls on "Operation New Pin" this is achieved by glass screens and pressurised benches.

smoking in the workrooms will not affect her much; nor will she mind being forbidden to eat at her bench, especially since the firm provides a canteen. But she may instinctively resent being deprived during working hours of that vital accessory, her handbag.

Back on the credit side, welfare facilities are of a high standard. A well equipped first-aid and rest room has a welfare officer in permanent attendance. The atmosphere is friendly and wages are sensibly proportioned to the intricacy and strain of the work, and an incentive scheme bolsters up the piece-work rates.

The spaciousness which is a striking feature of the factory's design enables the production process to flow in easy sequence from one end of the factory to the other. This means that movement is kept to a minimum, as there is no need for the operators to move from their benches.

During the first month's training, and especially on assembly work which is more intricate than component making, headaches from eye-strain are likely to occur. This seems to be because the girls rely upon their eyes too much at first. As they get used to the work their actions become more mechanical until they use their eyes less than their practised fingers. Some time ago the firm introduced large magnifying glasses for work on the smallest components. Shortly afterwards it was noticed that the lenses had been discarded. Apart from the distortion occurring at the edges of convex lenses, magnification also gives a false impression of clumsiness. To the girls it was like learning a new process, so the lenses were removed.

Greater Responsibility

One section of the factory is devoted to the production of sub-miniature valves largely for use in guided missiles. These require maximum reliability, and the workmanship must, therefore, be of a like standard. Stricter measures of cleanliness are enforced: the girls work from behind glass screens to prevent moisture from their breath condensing on the components. Girls for this work are selected from among the best operators in the other sections. The rates of pay are proportionally higher, and to produce the acute sense of responsibility and care so vital to the work, "Operation New Pin" as it is called, has been conceived as a factory within a factory. Since the work is distinctive in importance, the girls wear distinctive blue overalls and headscarves, and no one is allowed to enter this partitioned area without a nylon overall, which is replaced at the first sign of fraying.

However impermanent female labour may be, with its complications of marriage and family ties, it seems fair to say that if a woman feels her work is important she is more likely to stay in that one job provided that rates of pay and working conditions are satisfactory. *Hivac* are providing that sense of importance. Their South Ruislip factory has been working at full strength for only two years, so it is impossible to assess the staying power of the staff. But at one of their other factories in Chesham, which is engaged in much the same kind of work, many of the women have been employed there since 1941.

It takes from three to six months to train a fully competent assembler. In that time, while she works alongside a skilled operator, she herself can tell if she has the correct aptitude for the job. And once the strain of the initial training period has passed, experience shows that the operator will most likely stay with the firm. The problem of the future, however, is that valves are going to be yet smaller and even more reliable. The research staff already have that in hand; whether selection of operators is to be more rigid will have to wait upon the state of the future labour market.

An old Industry Renovates its Human Relations

Problems of human relations in the Wool Textile industry are common to all its member firms. Realising this the employers are making a joint effort to find modern methods for this, the oldest of Britain's industries.

By Robert Douglas

TEACHING an old dog new tricks is wasted effort, unless the dog is actually willing to learn. It is often the same with old industries, the tricks in this case being the skills of human relations. While production methods and even working conditions are improved it is often forgotten that the staff, too, is changing in its outlook towards work and management.

Britain's oldest industry—wool textiles—has shown its willingness to learn new tricks, and has spent the last two years teaching itself. The recruitment, education and training department of the Wool (and Allied) Textile Employers' Council has set in operation a comprehensive human relations programme, aimed at spring cleaning management's ideas from top to bottom.

Directors, managers, foremen, overlookers and even apprentices have taken part in courses designed to air their problems and opinions over the wide range of staff relations. Recruitment, training, discipline and control, resistance to new ideas; these are factors of management's day-to-day work. At each level they present their own particular problems, and the courses enable small groups drawn from each separate grade to exchange views in an effort to find a common solution.

All courses are divided into separate day or evening seminars, held at weekly intervals and spread over a period of four or five weeks. They do not take place in a vacuum. The belief that "practical men are the finest experts in human problems" is firmly held by the course leader, Mr. J. W. Humble, who has helped to plan and organise the programme. The arrangement of the courses enables these "practical men" to learn a fresh approach in conjunction with their practical everyday work.

A critical attitude is encouraged, which includes self-criticism. As one manager has put it: "to realise one's own shortcomings can be quite inspiring". Self-confidence and a greater facility in self-expression are high on the list of the programme's aims. They are fostered more easily in the small groups which never include more than 20 persons.

Most of the courses take place at the R.E.T. Department in Bradford, but to meet firms' special requirements they have been held in other centres like Halifax and Huddersfield. The interest shown by individual firms has been encouraging. Since the programme started 120 companies have taken part, and over 800 people have attended the courses and seminars.

From the beginning the organisers have intended the programme to embrace as many of the industry's different staff grades as is practicable. The youngest members have not been forgotten; at the start of their careers they are at their most educable in the skills of human relations.

Last summer, for three days spaced at weekly intervals, the wool textile industry sent its apprentices and junior operatives to a conference in Bradford. The theme was "Responsibility in Industry" with the sub-title: "Where do *I* Fit in?" An agenda covering fully the industry's function, and the parts played by its employees hammered home the point that responsibility was shared by all, irrespective of rank. There was no attempt by speakers and discussion leaders to trim their approach to this young audience. "Talking down" was ruled out in the belief that treating them as responsible members of the industry was a certain method of making them feel and act responsibly.

This was proved correct. The audience responded in a lively, adult manner. Discussions were conducted in an atmosphere of serious application to the problems presented, and the subsequent reports compiled by the boys were of a very mature order. The conference was, in fact, just another item in a general programme of courses designed to keep the industry abreast of a changing climate of opinion.

The fact that the seminars are attended by people from one level at a time seems to be the main reason for success. The lectures, visual aids and examination of case studies are but a small contribution compared with the participants' awareness that they have gathered to thrash out common problems, and to make a joint effort towards a solution. In the same way the complete programme demonstrates how the separate units of large industry can contribute towards a joint effort in finding a new way in human relations. It is the industry's problem and the industry has united to solve it.

A foreman's course in action. They serve different firms but their problems are the same.

PEOPLE AT WORK

Anti-Colds Campaign

A NATION-WIDE enquiry among personnel managers in industry has been begun by the Social Service Research Group of 41, Oxford Street, London, W.1. The topic of this enquiry is the common cold and the object is to collect as much data as possible on this all too prevalent nuisance with the idea of developing a "Beat the Colds" campaign. Personnel and welfare officers are asked to write to the Group for a required number of questionnaire forms. They will then be asked to arrange for members of the firm who suffer from a cold between now and early spring, voluntarily to complete the questionnaire *at the time when the cold is being experienced.* Prepaid envelopes for the return of the completed forms will be supplied and, of course, no expense will be incurred by those firms or individuals co-operating in the campaign.

In addition to the main enquiry each firm will be provided with a month-by-month progressive chart showing the incidence of colds on a national basis. This chart can be displayed on the notice board for comparison with the firm's own figures. If incidents of colds in an individual firm are higher than the national average it may indicate the necessity for improvement in ventilation, heating or conditions of work.

School For Drivers

THE Eastern Region of British Railways has recently opened a school for the training of steam locomotive drivers in the new techniques of operating diesel powered trains. The school is at St. Ronans, Hadley Wood.

Drivers from all parts of the region will attend the school for a course of two weeks' training in diesel train operating under specialist instructors. The first week of the course will be spent largely in the lecture room and the second week operating a diesel powered unit on the line. The training syllabus begins with an introductory talk on the theory of diesel power and is followed by lectures and demonstrations of the diesel engine, its fuel injection, transmission and final drive and the control and vacuum systems. These lectures are spread over the first week, each day being split into periods, two in the morning and two in the afternoon.

At the end of the first week the drivers are introduced to the diesel train where they are able to see the layout and function of the equipment covered during the lectures and as a preparation for the actual control and handling of the diesel train during the following week. Each course will consist of 12 drivers.

Longer Holidays?

AT least one month's holiday a year for everyone in industry is advocated by Dr. G. A. Powell-Tuck, of Dorridge, in a recent issue of the British Medical Journal. Concerned by the increasing number of patients with anxiety and tension states and symptoms of psychosomatic illness, he finds that many suffer from physical and mental exhaustion which he attributes in part to "the ever-increasing tempo of modern life". A large proportion, however, he traces to the "inadequate annual holiday period which appears to average about two weeks". This adds another string to the T.U.C.'s already taut bow, and may well increase the number of psychosomatic patients amongst employers.

Ability—Not Age

NEW laws, just going into effect in Pennsylvania and Rhode Island, U.S.A., forbid employers to state arbitrary age limits in their advertisements for job vacancies. Drawing attention to this attempt to crack what it calls "the age barrier", the American personnel management newsletter, "Manpower Today", suggests that this autumn will see much investigation into the problem of workers in the 40-plus age group. Similar laws are proposed for the state of New York and Illinois and the American Labour Department is soon to release a report on the subject.

The article doubts whether legislation can really change an employer's ingrained attitude, and it concludes with an appeal to employers "to give the older worker an even break, judging him by ability not years". Certainly in Britain, where the same attitude unfortunately persists, the older job applicant would feel safer with the employer, rather than the law, on his side.

Gimmicks Help To Fight Accidents

ONE of the features of a recent safety campaign within all the steel works of *Richard Thomas & Baldwins Ltd.* was the re-introduction and distribution of books of gaily printed safety matches. Several years ago books of safety matches were to be found in each employee's weekly wage packet. But this scheme was dropped when it was noticed that people missed the point and accepted the matches just as a gift. Now, the safety officer carries pocketsful of matches as his job takes him over the plant. When he sees an employee committing or about to commit a dangerous or careless action he stops him and hands him a book of matches. No word is said and the recipient is left to puzzle out the reason for this unexpected gift.

Many other "gimmicks" are being incorporated in the company's nation-wide safety campaign. Notebooks, whose covers plead "Please Note—Safety Pays", are being distributed together with blotters urging "Don't have a blot in your department." In the canteens mats and ashtrays bear appropriate safety mottos while pencils and payslips, too, proclaim the need for constant caution in this, the most dangerous of industries. Although the poster is the traditional medium for putting over safety propaganda, this company believes that such personal and intimate reminders throughout the working day will help to reduce their already low accident rate.

Welfare de Luxe

WORK is proceeding to schedule on the new £260,000 welfare block which is now being erected at *Wall's* ice-cream and meat products' factory in Godley, near Hyde, Manchester. The block is due to be completed in July next year and will include a chest X-ray unit, a surgery, a room for optical and sun-ray treatment, rest rooms and facilities for chiropody. In addition the four-storey block will contain canteen, office and laboratory accommodation.

Competition Grows

ALTHOUGH entries do not close until January 31, applications to be considered for the 1957 award of the Sir George Earle Trophy are already being received by the Royal Society for the Prevention of Accidents. The trophy —a handsome silver Georgian inkstand— was presented to the society last year by Sir George Earle, chairman of the *Associated Portland Cement Manufacturers Ltd.*, for annual award for an

The new five-storey **Lush Furniture** factory in Birmingham is built on modern American lines. Breaking with tradition, the inflammable mill section is safely situated on the top floor. This photograph of the upholstery department shows the fire-proof material sprayed on internal pillars. Proof against one hour's fire, the management prefers it to a sprinkler system. To eliminate dust, floor sweepings are sent down a vertical chute to the basement for disposal, and other welfare facilities include thermostatically-controlled heating and a sound-proofed costing section to muffle noise from the accounting machines.

outstanding achievement in the cause of industrial accident prevention.

The trophy is open to all industries, companies, local accident prevention groups, branches of the Institution of Industrial Safety Officers, and such other bodies in the United Kingdom as the National Industrial Safety Committee of RoSPA may determine from time to time. It is *not* open to individuals. Final adjudication is the responsibility of a special committee set up by RoSPA. The award will be made at the annual conference, which will again be held at Scarborough on May 31-June 2, next year.

Organisations wishing to be considered for the 1957 award of the trophy can obtain entry forms from the Secretary, RoSPA, Terminal House, 52, Grosvenor Gardens, London, S.W.1.

Politics and Unions

POLITICAL activity is viewed by the United Auto Workers' Union as "a natural adjunct" to collective bargaining, writes Marjorie Thines Stanley in a recent issue of the American "Industrial and Labor Relations Review." Mrs. Stanley contends that the kind and direction of political activity of the U.A.W. is related to the economics of the auto industry—specifically to the theory that the more money spent on autos, the higher the national income. Hence, she says, the U.A.W.'s political action is simply an attempt by the union to further job security—not a basic "change in direction" of the labour movement. "If the merging of political activity with collective bargaining is emphasised more by the U.A.W. than by other unions", she writes, "much of the emphasis can probably be traced to a greater political consciousness on the part of Walter Reuther" than on other union leaders.

In exploring the U.A.W.'s political action programme, Mrs. Stanley examines union strategy, its stand on social security, and its drive for the guaranteed annual wage.

APPOINTMENTS

The Council of the Institute of Personnel Management announces the appointment of **MR. LESLIE STEPHENS** as director of the Institute. He will take office early in 1957. Mr. Stephens served for seven years with the factory department of the Ministry of Labour and National Service, and since 1946 he has held the appointment of Principal of Fircroft Working Men's College, Birmingham.

He succeeds **MR. M. B. FORMAN** who has held the post of director for the past three years and who leaves it to take up an appointment with the staff department at the headquarters of the National Coal Board.

The Minister of Labour and National Service announces that he has appointed **MR. D. R. F. TURNER** to be his principal private secretary in succession to **MR. J. L. EDWARDS.**

MR. PETER WICKINS has joined the sales staff of *Safety Products Ltd.*, manufacturers of personal protective equipment. Mr. Wickins is a former editorial officer of the Industrial Safety Division of RoSPA.

MR. IAIN S. MALCOLM, T.D., B.Sc., has been appointed education and training officer to *Hoover (Washing Machines) Limited*, of Merthyr. Mr. Malcolm was, for some years, senior education officer for the city and county of Dusseldorf, North Rhine/Westphalia, Germany.

MISS ELIZABETH M. GUTHRIE has been appointed catering officer at Leeds Maternity Hospital. Before this appointment Miss Guthrie was catering officer at the Royal Eye Hospital, London.

ILO Stamps

A NEW series of Swiss postage stamps have been designed for the use of the International Labour Organisation at its Geneva headquarters. It consists of six stamps. Three have as their design a picture of miners after a bas-relief on the Albert Thomas monument in front of the I.L.O. building, commemorating the organisation's first director. Values and colours are: 5 centimes, grey; 10 centimes, green; and 40 centimes, blue. The other three—20 centimes, red; 60 centimes, brown, and 2 francs, purple—carry a symbol of industrial labour with a terrestrial globe, a wheel carrying a transmission belt and a factory chimney.

The cancellation stamp, which will be in use only until December 31, 1956, includes a stylised reproduction of "L'effort humain", by the Geneva sculptor James Vibert, which stands in the I.L.O. grounds.

Breaking New Ground

FIRST woman to be elected to the Council of the Dublin Junior Chamber of Commerce is 26-year-old **MISS BERYL GAVIN** who combines the duties of an unofficial personnel manager and private secretary to the managing director of the Dublin firm, *Thos. Dockrell, Sons & Co., Ltd.*

This follows on Miss Gavin's election to the Irish Management Institute in June last. Such achievements are quite common in Britain but not in Eire, and Miss Gavin feels she is establishing a worthwhile precedent. Apart from her numerous business duties, she has also found time to write three volumes of poetry.

OBITUARY

THE sudden death occurred recently of **MR. C. T. H. GILBERT,** for twenty-five years catering manager of *Leyland Motors Ltd.* Mr. Gilbert, who was 70 years of age, was a Fellow of the Hotel and Catering Institute. His enthusiasm for his work was based on the firm conviction that a good canteen was as essential to a firm as a first-aid department or even a drawing office.

Useful Gadgets for the Canteen Kitchen

By L. BANHAM, A.M.H.C.I.

Most canteens are adequately fitted with basic equipment, but not all of them make full use of the gadgets that can save time and labour. Here, then, is a review of the more important gadgets for the kitchen. The author points out that all staff should be properly instructed in their correct use.

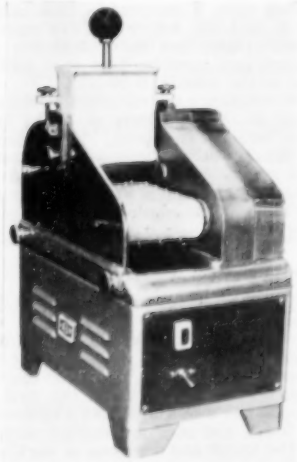
A mixer is a really indispensable gadget. This "Peerless" model has a bowl capacity of 30 U.S. quarts and the mixing range is ¼ lb. to 18 lb. flour. Lubrication is automatic and all working parts totally enclosed.

WHAT might be looked upon as a useful gadget in the domestic kitchen need not be so regarded in the canteen kitchen. If labour is to be saved by the use of gadgets they must be strong of construction, easy of operation and capable of doing a particular job in much less time than would ordinarily be the case. Otherwise they must fulfil a particular function like the timing device which rings a bell to give warning that the boiled eggs are ready or that the tea has brewed for the required five minutes.

Most of the labour-saving gadgets which are of any real use in the canteen kitchen are those which are automatic or semi-automatic. These are generally found to be accessories or attachments to basic pieces of equipment. As such, they extend the use to which the item can be put and since they are automatic or semi-automatic they play their part in reducing labour costs.

It is not, however, the number of labour-saving devices in the canteen kitchen but how they are used which makes their purchase really worth while. It is fundamental, therefore, that the staff should receive full instruction in their correct use.

It may well be argued that a vegetable cutting and food preparation machine is duplicating some of the work that could well be done by another type of machine. To a point this is inevitable and even desirable as a cover against breakdowns. It should be remembered, too, that while the vegetable cutting machine might be adapted to mash potatoes it is indeed unlikely that the potato mashing machine could grate cheese for instance.



Gadget of gadgets is this speedy butter spreading machine which works on the sheepsfoot roller principle. A predetermined amount of butter is forced on to the bread. However the machine is fed, butter is applied only to the bread and does not extrude if the bread is not in fact passing through. Can be operated up to 50 slices a minute.

This "Auto-Chef" gadget not only cuts varying sizes of chips, but mashes potatoes, cores apples, grates, slices, shreds, squeezes, etc., by means of nine separate attachments. Cleaning takes only one minute.

Electric food mixing machines are often used for such purposes as mashing potatoes but a separate potato-mashing machine is generally a better prospect. The latter will usually give a better result because of the nature of its design. The electric mixing machine should be kept for batter, pudding mixtures, pastry making and the like, using the spade, the dough hook and the whisk where appropriate. In many models it is possible to have a mincer attachment, a breadcrumber and a vegetable slicing attachment and a device for making purees and straining of soups.

There is proably no more useful item of equipment in the kitchen than an efficient slicing machine fitted with the appropriate attachments. A slicing machine, properly used, will reduce food costs by the elimination of waste and labour costs by its speed of operation. Roast meat will slice better when cold than when hot and for that reason will provide more portions to the pound. When it is required to slice the meat hot then let the joint stand for at least half an hour in order to get the best results.

Cold meats corned beef, luncheon sausage and tongue can be readily sliced without any loss. Oranges, lemons, tomatoes, celery and cucumber can be sliced to any desired thickness. Some machines are even fitted with a hopper to permit the slicing of apples, cabbage and lettuce. The great advantage of the

machine lies in the fact that it is possible to have uniformity of slice and thus guesswork is eliminated. It is possible to say, for example, how many portions can be had from a tin of luncheon meat or how many slices from a loaf of bread before the work has begun. A good machine will even slice fish into cutlets without the backbone being removed if this is reasonably light.

One of the most difficult food items to slice without undue waste is the tomato. The firm of *Benham and Sons* have introduced their "Multislice" precision-made tomato slicer which, it is claimed, will cut tomatoes into thin even slices in a moment. The work is done by fourteen super-sharp stainless steel blades which are sharpened on both sides for use either side up. The fittings are of chromium plate and the machine is easily separated for cleaning and just as quickly re-assembled. A replacement service for damaged or broken blades is available.

This should prove particularly useful in those canteens where salads are popular or sandwiches are sold in any quantity.

Most cooking ovens are sold with thermostat devices already built in but this is not always the case with fish fryers. The models produced by the more progressive firms have automatic filtering, thermostats, and a bell to indicate when the food is cooked, and will enable different foodstuffs to be cooked at the same time without any transference of taste.

Finally, it should of course be stressed that gadgets do not replace the skill of the cook. They only help to make his job easier, cleaner and quicker.

For the night shift or during the absence of the chef is this "Auto-Timer" which enables any normal thermostatic electric oven to be controlled automatically up to 12 hours.

Useful for measuring small quantities are these "Lighthouse" scales. They have a 20 lb. capacity, are self-levelling and the chart can be read from any angle.

How to Keep Food Clean — *SOME SIMPLE HINTS FOR THE CANTEEN*

THE part the public can play in the cause of clean food and the prevention of food poisoning goes further than the mere act of returning a cracked cup to the waiter or shunning a café where flies are allowed to crawl over the food on display. The fight against bacteria should be waged on all fronts, states an article in a recent issue of *Health Horizon*. Although it is entitled "Food Hygiene—and the Public", what its authors (two food inspectors) have to say is of equal importance to the staff of canteens and catering establishments whose job is to handle, prepare and serve the food.

The cleansing and boiling of all scouring cloths, swabs and dish cloths is stressed emphatically, since the majority of bacterial organisms are destroyed between the temperatures of 145° and 212°F. (boiling point). Refrigeration of food does not kill the bacteria living on it, but below 45°F. they cannot multiply. In ideal conditions of temperature they multiply by splitting in two every 20 minutes—a process which multiplies a single organism by 2,000,000 in seven hours.

Perishable foods should be kept either very hot or very cold, and to avoid the "just warm" conditions spreading to the refrigerator it should be installed somewhere away from the kitchen and the temperature checked frequently with a reliable thermometer especially in summer.

Bacteria, however, are not particularly conscious of the seasons. Winter or summer a warm kitchen makes an ideal home. Fresh meat should be washed before cooking—never partly cooked, and never left in the wrapping. It should be hung, if possible, in a refrigerator so that all parts are in contact with the air. Fresh fish should always be washed, although it is rarely the cause of food poisoning, and meat pies, which are best kept unwrapped in a temperature of between 45° and 50°F., should be used as they are required; no uneaten portions should ever be replaced in the refrigerator. Moving a pie from cold to warmth only softens the pastry and speeds up the growth of mould.

Decomposition can be detected in poultry by the darkening of the flesh, which turns greenish in colour. The liver is a good test for soundness; it should be clear of spots and of a good consistency. Sausages also darken and the skin grows dry when they are stale. They are easily broken and often smell sour. Mould will betray their staleness as it does in the case of brawn and corned beef.

There is no truth, the article continues, in the belief that canned food, once opened, should not be kept in the tin, but obviously the same care to prevent contamination must be taken as with uncanned foods. They remain sound for a long time if unopened, some canned meats and fish lasting for five years or more. Hams are the poorest in this respect and must be kept very cool to last, at the outside, 6 months.

In conclusion the authors offer a useful guide to the soundness of tinned food, even before it is opened: "A tin should be concave at both ends; if it is convex this means that the food inside it has generated gas, and it should not be used for human consumption."

'Sandwich' Course for Young Caterers

ACTON Technical College have now launched a new type of catering course known as a Four-Year Sandwich Course of Hotel and Catering Management. It is so called because trade experience is being "sandwiched" between training at the College.

During the first six months of training, the students will cover a wide variety of subjects—the most important being trade cookery. The second six months will consist of practical work in hotel, restaurant or industrial canteen or industrial canteen kitchens; this will be followed by another six-monthly period at the College. During this period the emphasis will be placed on the Service of Food as the students' next six months of practical experience will be in hotel or restaurant dining rooms.

The third six-monthly period of College training will deal mainly with reception and the clerical side of hotel and catering work, housekeeping and general maintenance in order that the students may then spend the next six months in the appropriate departments of hotels and catering establishments.

The fourth and final year of the Course is designed to fit students to be able to assist in the control of the various departments of hotels or catering establishments and will include instruction in licensed house management. The last phase of the Course will be practical experience as a general assistant and the taking of the A.M.H.C.I. (Associate Membership of Hotel and Catering Institute) examination.

This is believed to be the first sandwich course of its kind.

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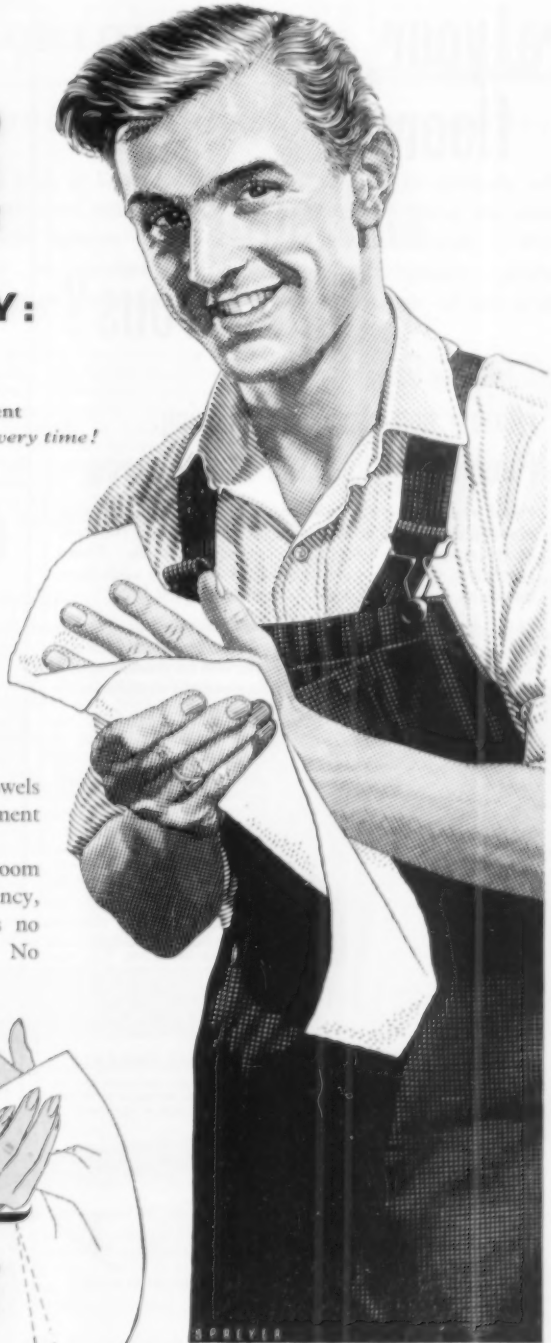
IS A BETTER DRY:



- **Hi-Dri is the most economical and efficient method of providing a clean, dry towel *every time!***
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In the factory, in the office, Hi-Dri Paper Towels make a big contribution to good labour/management relations.

Install Hi-Dri at the bench and in the washroom as added protection for staff health and efficiency, and reduce absenteeism. With Hi-Dri there's no waiting, no wasted man-hours ticking away. No laundry bills — but a clean bill of health.

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Altro nonslip properties last the long life of the products with no dangerous grooves or projections to catch heels.

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Heating & Lighting

Readers who wish to know the suppliers of any of the products referred to in this section are asked to write to the Editor, quoting the reference number which appears at the end of the paragraph. We are always glad to consider for publication descriptions — preferably accompanied by an illustration suitable for reproduction—of new products.

HANDY TIME SWITCH

THIS *Relyon* time switch is ideal for controlling heating and lighting in stores. It is simple to set and can control up to 12 on/off operations in 24 hours. In this way window lighting, floodlighting, special decorations and, in fact, all lighting arrangements can be left on in the evening and the *Relyon* will automatically shut them off at any pre-set time.

The same principle applies to shop heating arrangements; these can be put

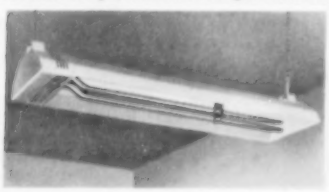
into effect at a given time before the store opens, thereby ensuring comfortable warmth for both customers and employees first thing on cold winter mornings. The *Relyon* is sturdy and compact, easy to install and maintain. It operates off 200/250 volts, 50 cycles, and is available in single or twin circuit models.

(PM/1191)

LARGE AREA HEATER

THIS new overhead radiant heater is designed to provide adequate warmth where needed in places such as large machine shops, aircraft hangars and the like where the over-all area is too big to heat economically. The heater comprises a rigid anodised aluminium reflector fitted with *inconel*-sheathed wire elements. It is available in loadings of 1½ kW and 3 kW. The design of the aluminium trough enables another element to be added to a 1½ kW heater, giving an output of 3 kW, if required, without further alteration to the trough.

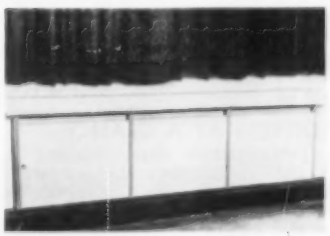
(PM/1192)



PANELLED WARMTH

THESE electric heating panels provide radiant and convected heat and, due to the relatively low surface temperature, are completely safe and highly efficient. The heating surfaces are non-metallic and the elements are embedded and hermetically sealed in panels of tough insulating plastic. These sealed elements with their five-year guarantee, are virtually everlasting and cannot overheat in normal use. The smooth surfaces, when painted to match the surroundings, will merge unobtrusively into period or modern decorations.

Due to the large surface area operating at a comparatively low temperature, no violent convection currents are set up in the air and the larger volume of gently



warmed air has not the same tendency to rise to the ceiling as with electric fires and similar high temperature appliances. Furthermore much of the heat is emitted by direct radiation so that heat is conserved where it is wanted—near the floor.

Fixing to the wall is by means of grooved hardwood supports, cappings and deflector shelves, enabling any number of panels to be mounted edge to edge in a continuous run. Each panel measures 16 in. × 22 in. wide and when mounted the height of the shelf may be either 18½ in. or 24½ in. above the skirting board.

(PM/1193)

Safety

DUFFLE AND DONKEY

TWO new additions to a well-known firm's current range of protective clothing are the *Toggler Duffle Coat* and the *Middlejac Donkey Jacket*.

The duffle coat is a full-length heavyweight garment of 32 oz. Blue Melton

material, with hood and wooden toggles, two outside patch pockets, waterproof double-texture twill saddle lining.

The donkey jacket is in 30 oz. Blue Melton waterproof check saddle lining, two outside patch pockets, button four.

Both these garments can be bought at very moderate prices.

(PM/1194)

SILICONES FOR HANDS

NOW on the market is *Syl*, a new silicone barrier preparation which, say the makers, has proved itself a first-class protective preparation against industrial dermatitis. This preparation incorporates the silicones into a continuous and flexible film—no droplets forming on the skin—that is said to be exceptionally water resistant. The product is prescribed by doctors on the National Health Scheme and is said to allow for more complete cleaning of

allergen carrying grime from the skin. It is an important feature of the silicones, that they resist penetration by aqueous solutions but are permeable to vapour and gas. The skin is thus protected and at the same time can breathe and discharge its secretions unhindered.

(PM/1195)

TRANSLUCENT DOORS

THE makers of the well-known *Neway* flexible doors have recently put on the market this translucent door for use in warehouses, offices, canteens, hospitals and retail stores. For safety purposes it is a great improvement on the conventional type of door as it enables the whole

of a truck or individual approaching from one side to be seen from the other. The panels are produced in a plastic material with a grained surface and are said to have a very pleasing appearance.

(PM/1196)

ANTI-PEROXIDE SUIT

THIS special lightweight protective suit for rocket research workers has recently been developed to give protection against high test peroxide (90 per cent hydrogen peroxide) used as jet and rocket motor propellent. This new type of suit is made with terylene coated with PVC. It weighs only 3 lb. (approx.) and is worn by personnel on the rocket test beds of the *De Havilland Engine Company* and *Armstrong Siddeley Motors Ltd.*

In addition to withstanding attack by hydrogen peroxide it is not harmed by repeated flexing. Thus PVC coated terylene fabric provides permanent protection over long periods of service.

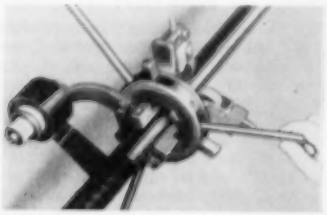
(PM/1197)

Efficiency Aids

LAG WITH EASE

THIS pipe lagging machine has a quick-acting and self-centring gripping device so that once locked in the required position the lagging is carried out with the exact amount of overlap required throughout the length of run. Setting of this gripping device is simplicity itself, a scale being provided with the machine which the setting is given depending on diameter of pipe and width of tape being used and the degree of overlap required.

The action of the machine is extremely simple, it being necessary only to place



the dispenser along the pipe, the lagging being carried out with precise overlap as the dispenser runs along. Timing tests reveal that a 9 ft. length of pipe can be lagged in 1¼ minutes by any skilled or semi-skilled labourer using a 2 in. wide tape with a 1 in. overlap, i.e. to give a double thickness of tape throughout the run. The tension under which the tape is applied can be varied readily, it being fitted on a shaft which has adjustable friction leather pads.

(PM/1198)

PROGRESS AT A GLANCE

A PROGRESS chart installed by *Quarry Laundries Ltd.*, Marlow, Bucks, has not only improved the laundry's internal efficiency, but enabled it to give a better service to its customers. The chart (shown in the accompanying picture) is simple to use, and the information it records can be seen at a glance.

Each load of washing taken into the laundry goes through various processes before it is sent back to the customer. The chart records the progress of each lot through these processes, thereby enabling the exact location of any lot to be seen immediately. This laundry progress chart is just one of the many

applications of the system. One of the world's most flexible charts, it will plot the progress of any process or activity known to business today.

Basis of the chart is a perforated plastics board (there are 2,000 perforations to the square foot) available in various sizes. Figures, letters and signals simply peg into the board and are as easily removed. There are six major signals, available in 12 colours, giving over 20,000 signalling combinations. Title frames are supplied for easy identification. Flow lines—lengths of coloured elasticated cord—can be fitted to chart the progress of any activity. If required, a card index can be supplied, each card lining up with a line of perforations on the chart.

(PM/1199)

FLOOR LAYER

THIS machine is said to be saving Britain's building industry thousands of pounds by introducing a new method of laying solid concrete floors. Not only does the power float lay concrete floors more efficiently, but it simplifies and speeds up the process. The introduction of the power float to building practice has also meant a "no screed" process of laying concrete floors. By

this means a perfect finish is produced directly on to oversite concrete or structural slabs, thus eliminating the need and the cost of screeds.

Other important uses of this machine are the attachments which are designed for ancillary functions. Special wire brushes are used in the preparation of the base slabs, prior to toppings and grano-

lithic or other floors being laid, which ensure very high bond efficiency. It can be operated with confidence by any capable worker after a brief introduction, and will stand up to the heaviest demands of building site work. Both petrol and electric models are available. **(PM/1200)**

Packaging

UNIVERSAL PACK

A NEW and technically interesting universal pack has been developed by a London firm who are well known as manufacturers of hygienic food containers and specialists in high-quality packs of other types.

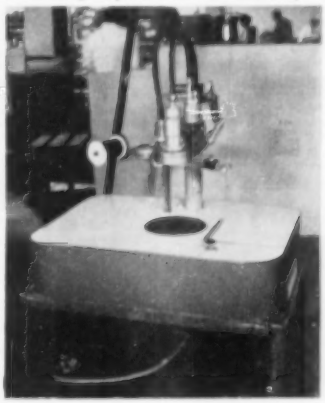
The new carton—it is known as the *Hermetet*—is said to ensure a simple yet fool-proof method of providing an air-tight pack for hundreds of products in industries ranging from confectionery, food and drink to certain sections of engineering.

In its essentials, the Hermetet pack is of fairly simple design, embodying a card or paper carton containing a closely associated inner wrap of heat-sealable type. The inner wrap can consist, in fact, of any kind of material the product demands. The ingenious character of the pack, however, resides in the special method of cutting, creasing and folding the outer wrap, and in the method whereby the inner wrap can be sealed externally, as an integral operation.

Both outer and inner wraps can be specially constituted to suit the product as well as the merchandising, distribution and storage conditions. The inner wrap, for example, may be of p.v.c., polythene, cellulose film or a laminated film, and may be either moisture-proof or non-moisture-proof ("breathing" type). **(PM/1201)**

PNEUTAPER

THIS is said to be the first British semi-automatic machine to seal cylindrical containers with self-adhesive tape and tear strips. Capable of 30 to 40 sealing operations a minute, the



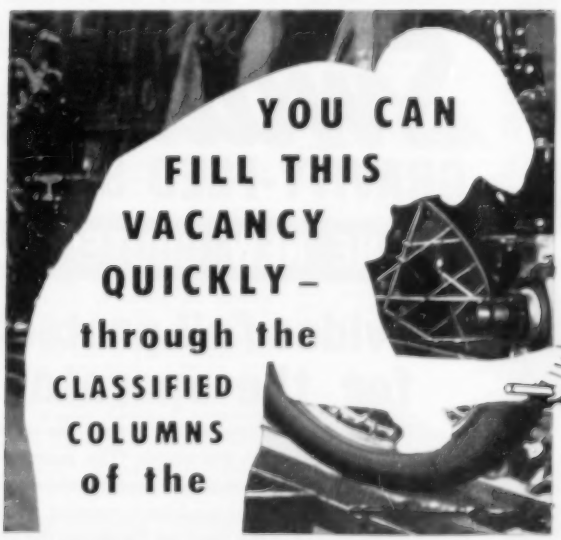
Pneutaper will handle tins, glass jars, cardboard drums and plastic containers with diameters ranging from $2\frac{3}{4}$ in. to $6\frac{1}{2}$ in. and heights from $\frac{1}{4}$ in. to $8\frac{1}{2}$ in. The machine will apply sellotape from rolls of up to 350 yards in length with a 3 mm. film tear strip.

The tins are first placed on the machine turntable. Then, as the start button is pressed, a clamp descends to push the lid on tightly and hold the tin firmly on the turntable. No careful positioning is needed. At the same time, the taping arm swings forward and the free end of the tape is attached to the tin. As the turntable rotates the tape is drawn on to the rotating container and pressed down by a wiper to ensure strong adhesion. If a container with a beaded lid is being sealed, the wiper rolls the tape over the bead. Tear strips are bonded to the tape as they pass between rollers on the way to the taping arm.

When the turntable has turned through 360 degrees, plus about 5 degrees for the overlap, a cutting blade severs the tape leaving a short length of tear strip protruding. The clamp rises and the operator moves the container off the turntable by pushing it with the next.

Adjustments for different container heights take only 30 seconds, and for different diameters the tape overlap can be re-set with an Allen key. The *Pneutaper* is operated by compressed air and any pump with working pressures in excess of 45 p.s.i. can be used.

(PM/1202)



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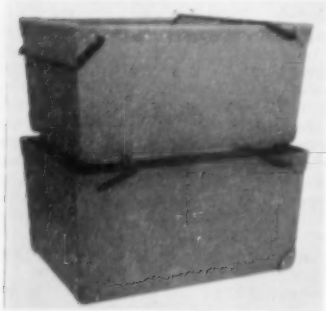

(PM/1203)

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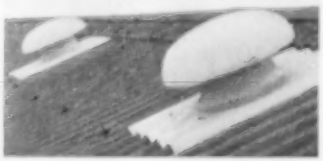

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Summary of Official Publications

READERS' GUIDE TO ACTS, STATUTORY ORDERS, NEW RULINGS AND AWARDS CONCERNING INDUSTRY AND PERSONNEL

GENERAL

Choice of Careers, New Series No. 13. Domestic Science and Dietetics. *H.M.S.O.* 1s. 3d.

Choice of Careers, New Series No. 29. Company Secretary. *H.M.S.O.* 9d.

Choice of Careers, New Series No. 68. Her Majesty's Forces, Commissioned Service. *H.M.S.O.* 1s. 6d.

Choice of Careers, New Series No. 72. Merchant Navy Officers. *H.M.S.O.* 2s.

Choice of Careers, New Series No. 74. The Ophthalmic Optician and the Dispensing Optician. *H.M.S.O.* 9d.

Choice of Careers, New Series No. 76. Prison Service. *H.M.S.O.* 9d.

Catering Wages Commission. Twelfth annual report, 1955. *H.M.S.O.* 3d.

Rehabilitation, Training and Resettlement of Disabled Persons. Report of the committee of inquiry. *H.M.S.O.* 5s. 6d.

Safety Hints on the Use of Woodworking Machinery. Factory Form No. 279. *H.M.S.O.* 9d.

Safety of Machine Tools and Other Plant. No. 1. Drilling machines: fencing of spindles, chucks and tools. Factory Form No. 291. *H.M.S.O.* 1s. 9d.

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List of Certificates issued by H.M. Chief Inspector of Factories in respect of intrinsically safe and approved electrical apparatus for use in certain specified atmospheres. Factory Form No. 931. *H.M.S.O.* 9d.

Scientific and Engineering Manpower in Great Britain. Report on their number and distribution, together with likely trends in future demands. *H.M.S.O.* 1s. 6d.

Method of Construction and Calculation of the Index of Retail Prices. Explains the weighting basis. *H.M.S.O.* 1s. 9d.

Staffing and Organisation of the Factory Inspectorate. *H.M.S.O.* 2s.

Accidents. How they happen and how to prevent them at factories, docks, building operations and works of engineering construction. Vol. 29. (New Series). *H.M.S.O.* 1s.

Foremen in Europe, their selection and training. European Economic Co-operation Organisation, project No. 234. 12s. 6d.

Impact of Science on Society. Vol. VII, No. 3. U.N.E.S.C.O. 2s. 6d.

STATUTORY INSTRUMENTS

No. 1615. The Wages Regulation (Boot and Shoe Repairing) Order, 1956. Dated October 16, 1956, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, 1945 (a). *H.M.S.O.* 1s. 9d. Sets out statutory minimum remuneration payable in substitution for that fixed by the 1951 Regulation Order and later amendments. Effective from 5/11/56.

No. 1624. The Wages Regulation (Ready-made and Wholesale Bespoke Tailoring) (Amendment) Order, 1956. Dated October 17, 1956, made by the Minister of Labour and National Service under Section 10 of the Wages Councils Act, 1945 (a). *H.M.S.O.* 5d. Amends 1953 Regulation Order and later amendments. Effective from 5/11/56.

INDUSTRIAL DISPUTES TRIBUNAL AWARDS

No. 902. Rates of Wages of Certain Workers Employed by a Firm of Metal Foil Manufacturers at Their Works at Barking. Claim: That existing wage rates be increased by 3d. per hour. **Award:** That minimum rates be increased by 2½d. per hour. Effective from 12/9/56.

No. 903. Observance of Specified Terms and Conditions of Employment by a Plumber and Decorator at Chorley, Lancs. Claim: That the employer should observe all the recognised terms and conditions of employment in the building industry. **Award:** Claim established. (14/9/56.)

No. 904. Rates of Wages of Certain Workers Employed by a Firm of Leather Cloth Manufacturers at Rawtenstall, Lancs. Claim: For an increase in basic rates of pay. **Award:** Flat rate to be increased by 10s. a week; not to count for bonus payments. Effective from first full pay period following 20/9/56.

No. 905. Remuneration of the Housing Estates Manager of the Metropolitan Borough of Islington. Claim: That salary scale F be applied to the above officer. **Award:** Salary scale E shall apply, effective from 1/4/56. (21/9/56.)

No. 906. Salaries of Administrative, Professional, Technical and Clerical Staffs Employed by Local Authorities in England and Wales. Claim: For an increase on all salary scales of the National Joint Council. **Award:** Salary scales shall be increased by 2½ per cent. Effective from October 1. (26/9/56.)

No. 907. Question as to the Observance of Recognised Terms and Conditions of Employment by a Road Haulage Firm at Beccles, Suffolk. Claim: That the employers should observe the above terms as established by the National Joint Industrial Council on February 2, 1955. **Award:** Claim established, effective from February 21, 1955, or first full pay period following. (27/9/56.)

No. 908. Rates of Wages of Workers Employed by a Brewery at Romsey, Hampshire. Claim: For a further increase on basic minimum rates of pay from January 2, 1956. **Award:** Basic minimum rate for adult males shall be increased by 4s. per week, with proportionate increases for women and juveniles. Effective from first full pay week in June, 1956. (2/10/56.)

No. 909. Rates of Wages of Workers Employed by a Brewery at Alton, Hampshire. Claim: For a further increase on basic minimum rates of pay from December 29, 1955. **Award:** Claim not established. (2/10/56.)

No. 910. Rates of Wages of Workers Employed at a Brewery at Winchester. Claim: For an increased basic minimum wage rate for adult male workers. **Award:** That the basic minimum wage rate for adult male workers shall be 150s. per week. Effective from beginning of first full pay week in June, 1956. (2/10/56.)

No. 911. Rates of Wages of Enginemen, Boiler Firemen, Oilers and Greasers Employed in the Cotton Industry. Claim: For a 12½ per cent increase in current wage rates. **Award:** That rates shall be increased by 5 per cent. Effective from first full pay period following October 2, 1956. (2/10/56.)

No. 912. Wage Rate of Boxcutting Machinists Employed by a Particular Firm at Norwich. Dispute concerning wage rate. **Award:** That the present correct wage rate is 4s. 2½d. per hour. (5/10/56.)

No. 913. Rates of Wages of Workers Employed in the Retail Pharmacy Trade in England and Wales. Claim: For improvements in minimum wage rates and payments for rota duties. **Award:** Claim established with regard to basic rates but not in other respects. Effective from beginning of first full pay period following October 10, 1956.

No. 914. Working Week of Workers Employed in the Tobacco Industry. Claim: For a reduction in working hours from 44 to 42 without loss of pay. **Award:** Claim not established. (10/10/56.)

No. 916. Rates of Wages in the Made Up Goods Section of the Leather Industry. Claim: For an increase in wage rates. **Award:** Minimum rates shall be increased by 3d. per hour for male workers age 21 years and over, and 2d. per hour for females age 20 years and over. Effective from first full pay period following October 15, 1956.

No. 917. Observance of Recognised Terms and Conditions of Employment by a Building Contractor at Brighton, Sussex. Claim: That the employer should observe above terms, especially those relating to termination of employment. **Award:** Claim established. (15/10/56.)

No. 918. Rates of Wages in the Metal Finishing Industry. Claim: For a substantial increase in wages. **Award:** Increases shall be, for men age 21 and over, 3½d. per hour for grade 1, 3d. per hour for grade 2, and 2½d. per hour for grade 3; for women age 19 and over, 2½d. per hour, and proportionate amounts for juveniles. Effective from first full pay period following October 17, 1956. (17/10/56.)

No. 919. Wage Rates of Workers Employed in the Farriery, Blacksmith and Agricultural Engineering Trade. Claim: For a wage increase of 6d. per hour. **Award:** That present minimum hourly rate of 3s. 11d. be increased to 4s. 1½d.; other increases to be settled by negotiation. Effective from first full pay period following October 18, 1956. (18/10/56.)

No. 920. Observance of Recognised Terms and Conditions of Employment by a Firm of Painters and House Decorators at Chadderton, Lancs. Claim: That employers should observe these terms. **Award:** Claim established. (19/10/56.)

INDUSTRIAL COURT AWARDS

No. 2626. British European Airways—Planner Ratefixers—Night Shift Premium—Claim for Increase. Reference: To determine a difference between the two sides of the Draughtsmen's, Planners' and Tracers' National Sectional Panel of the National Joint Council for Civil Air Transport following the refusal by B.E.A. to increase the night shift premium payable to Planner Ratefixers from time-and-one-fifth to time-and-one-quarter, as claimed by the employees' side. **Award:** Claim not established. (9/10/56.)

No. 2627. Tug Owning Companies Operating in River Clyde—Firemen—Scale for Stokehold Manning. Reference: Whether the present accepted scale for stokehold manning in oil-fired tugs be

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reduced by one. **Award**: Claim established. (9/10/56.)

No. 2628. Musicians Employed in Hotels, Restaurants and Clubs in the West End of London—Claim for Salary Increase and for Improved Conditions of Employment. Reference: To determine a difference between certain West End Establishments and the Musicians' Union in regard to weekly salaries, weekly hours of work, weekly spreadover, and rehearsals. **Award**: Minimum basic rate shall be £15 15s. 0d., actual playing time for a seven-day week with one free day shall be 28 hours with a spreadover not exceeding 43 hours per week. In addition there shall be one free rehearsal not exceeding 1½ hours per week. Effective from first full pay period following September 1, 1956. (30/10/56.)

CIVIL SERVICE ARBITRATION TRIBUNAL AWARDS

No. 317. Public House Managers in the Carlisle and District State Management Scheme. Claim: For increase in rates of pay with retrospective effect. **Award**: Claim not established. (15/10/56.)

No. 318. Packers and Porters (M), Storemen and Warehousemen in the Post Office. Claim: For increase in scales of pay with retrospective effect. **Award**: Claim not established. (23/10/56.)

No. 319. Assistant Controllers (Telegraphs) in the Post Office. Claim: For increase in salary scale with retrospective effect. **Award**: That (*a*) the London scale for Assistant Controllers (Telegraphs) shall be revised to £1,635 × £75—£1,845; (*b*) the new scale shall be effective as from April 1, 1956; (*c*) the allowance of £50 paid to Assistant Controller (Telegraphs) in the External Telecommunications Executive shall cease to be payable as from April 1, 1956; (*d*) the "corresponding points" principle shall be applied in the assimilation to the new scale of officers in post. (24/10/56.)

December Management Diary

BURTON MANOR

3-14 "Supervisory Management." Course for foremen.

2-7 "Nature of Management." Course for middle grades of management.

9-14 Course for Women Supervisors. Management problems and techniques as they affect women.

INDUSTRIAL WELFARE SOCIETY

7-10 **Grand Hotel, Brighton.** The Broader Aspects of Foremanship. Week-end conference for foremen and forewomen.

Non-residential Courses at Robert Hyde House

5-7 Workshop on Supervisory Training. A small working group studying problems of application.

11 Resistance to change among managers. One-day conference.

6 "New Thinking" Luncheon. Subject: "Some Priorities of the Ministry of Labour and National Service."

INSTITUTE OF INDUSTRIAL SUPERVISORS

7-9 **Ashorne Hill, Leamington.** Practice of Supervisory Management. Residential week-end course.

INSTITUTE OF PERSONNEL MANAGEMENT

2-7 **London.** Wage Negotiation and Industrial Relations. Five-day residential study course.

NATIONAL INSTITUTE OF INDUSTRIAL PSYCHOLOGY

3-7 **London.** Course in selection methods, Part II.

14 **London.** Conference of Trained Interviewers.

17-21 **London.** Course in selection methods, Part III.

URCHFONT MANOR

3-13 "The Human Factor in Industry." Course for foremen, chargehands and union representatives.

In Brief

WITH about three weeks to go before Christmas, there is still time to buy the Christmas seals issued by the National Association for the prevention of Tuberculosis for letters and parcels. They are available at 4s. per sheet of 100 from the Duchess of Portland, Chairman, N.A.P.T., Tavistock House North, London, W.C.1.

MORE than 4,800 Greek Cypriots emigrated from Cyprus last year, but not one of them went to Greece. The overwhelming majority (4,469) came to live and work in Britain.

The number of Cypriots in this country is now approaching 50,000, or about one-tenth of the population of Cyprus; 35,000 of them are in London. Between 400 and 500 Cypriots are arriving in this country every month. Many of them are without qualifications, but they quickly find employment in catering and in various industries.

THE sixth Electrical Engineers Exhibition at Earls Court next April will again be larger than ever. More than 360 exhibitors have taken space. The Minister of Education has consented to open the exhibition on April 9, and has expressed interest in a special feature stand depicting "Education in the Electrical Industry, Government Services and Educational Institutes."

A.S.H.A.E. Guide, 1956. (*American Society of Heating and Air Conditioning Engineers, 62 Worth Street, New York, 13, N.Y.*) Contains latest technical and equipment information of interest to the profession and industry.

Foundry Ventilation and Dust Control. (*British Cast Iron Research Association, Birmingham.*) Proceedings of a B.C.I.R.A. Conference at Harrogate, 1955. 257 pages, 264 illustrations.

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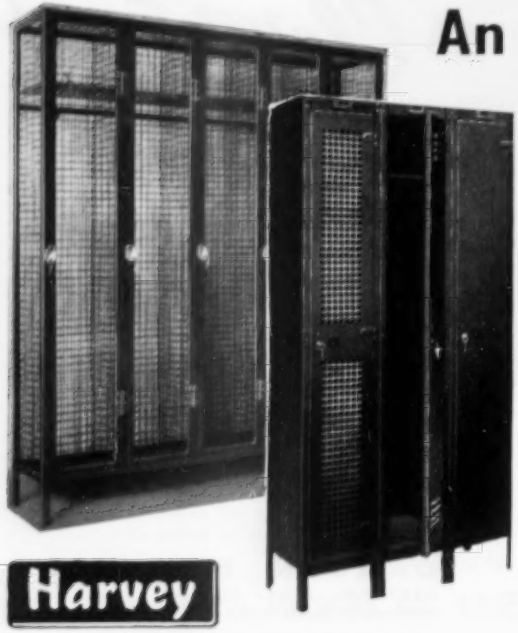

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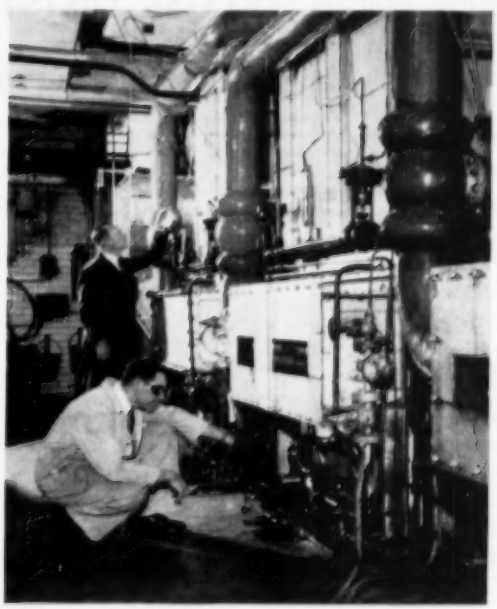

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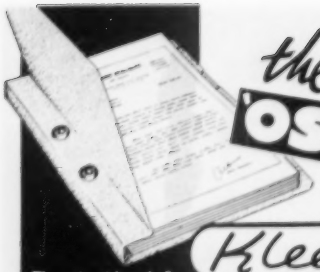

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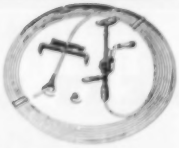

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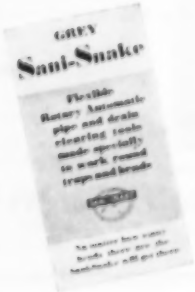

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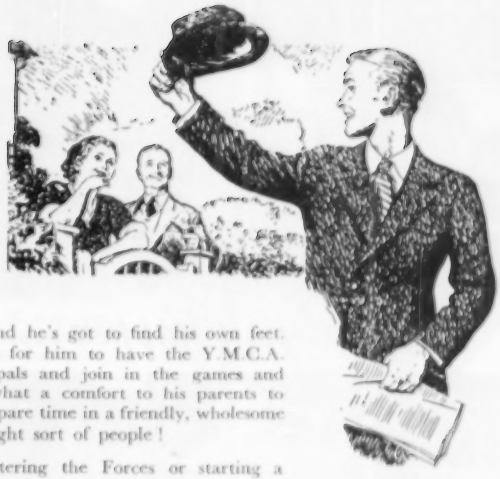

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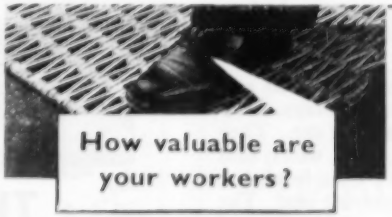

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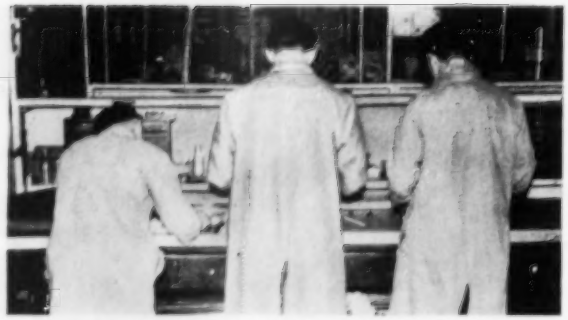

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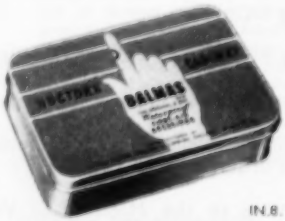

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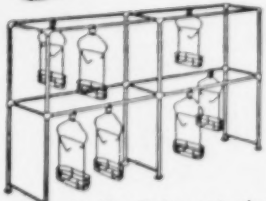

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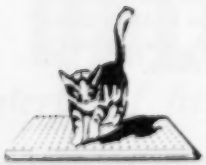

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